HABITAT ASIA

HABITAT ASIA SERIES

HABITAT ASIA
ISSUES AND RESPONSES

Volume I
INDIA

B S. Bhooshan   R P Misra

General Editor
R P. Misra

Preface

INTERNATIONAL CONFERENCES are one of the important communication channels which help in mutual understanding and decision making bi laterally or multi laterally on issues which concern people all over the world As time passes more and more conferences of this kind are being held indicating a growing awareness on the part of the peoples and their governments of the interdependence and mutual interest that bind them together into an international community This also indicates that people all the world over have at last realized that no nation can isolate itself from the rest of the world that what was earlier the exclusive domain of internal affairs can no longer be treated so if it affects the life liberties and welfare of those across the border and that the welfare of man is no longer the prerogative of the national governments alone the international community too has a role to play

It is in the pursuance of the above that a series of international conferences are being held under the auspices of the United Nations and its specialized agencies on topics and issues which are of mutual interest to all countries and which enhance and ensure human welfare The conference on Habitat (Human Settlements), held in Vancouver in May June 1976, was one of them One hundred and forty five national governments several inter governmental organizations, national liberation movements United Nations specialised agencies and one hundred and forty non governmental organizations participated in this conference One hundred and ten countries submitted national reports for discussion The major output of the conference was a set of recommendations for action by national governments The member countries endorsed these recommendations though no targets were set for their implementation It was hoped that the national governments would

take them up with a sense of urgency and would make a serious attempt to create a better habitat for their citizens

About three years have passed since this historic event. Some countries have initiated action and some others might have moved ahead substantially Still others may have yet to commence any follow up action One is therefore tempted to ask

1 What have the national governments done as a follow up of the conference ? Which of the recommendations have received wider responses ? Which ones have attracted attention or none or only a few ?

2. How far are the recommendations viable in the socio-economic and political context of individual nations ? What are the obstacles in the way of their implementation ?

3 How do the member nations view the Habitat issues generated by the Vancouver meet ? And what do they propose to do in the years ahead ?

4 What should be done at the international and other levels to accelerate the implementation of the Vancouver recommendations ?

To get to the answers to these questions the International Institute for Environment and Development (IIED) London initiated a research project aimed at making an overall assessment of the follow up of the Vancouver Conference in 1977 The idea was to assess the responses of selected countries in four major developing regions Latin America Africa South of Sahara, Asia and the Arab world Other regions would be brought into the picture as more funds became available IIED sought the co-operation of one national institute in each of these regions for this purpose. The Institute of Development Studies Mysore India was entrusted with the work pertaining to Asia.

The Institute selected six countries for detailed study These were India Nepal, Singapore, Indonesia the Philippines and Japan In view of the very distinct policy alternative used by the People's Republic of China to solve the emergent problems of human settlements, a preliminary study of China was also included in the programme These studies led to a consolidated

volume on Asia which is being published elsewhere separately
The report on Nepal has since been enlarged and published
independently A combined report including the findings of all
the four regional teams is also being published independently
under the auspices of the IIED

The remaining five country reports viz, India, Indonesia,
the Philippines Japan and Singapore are now being published
in three volumes entitled *Habitat Asia Issues and Responses*
This constitutes volume one of the series containing the report
on India

The present volume is based on the data both secondary and
primary drawn from various sources in the country
B S Bhooshan and Surinder Suri spent quite a few weeks in
different parts of the country during which they had the
opportunity to discuss human settlement problems and issues
with responsible people both in public and private institutions
The visits also yielded a great deal of secondary information
which was used extensively in the preparation of this book
A selected bibliography of these sources of information is given
at the end of this volume

Limitations

Although every effort has been made to get information from
as many sources as possible, given the constraints of time and
resources it is humanly impossible to understand fully all those
hidden forces that make governments institutions and people
think, believe and act in the way they do even in one's own
country Secondary data and a visit for two weeks does not
take one far Nevertheless the exercise which has given this
report cannot be said to be fruitless The idea was not to go
into the depth but only to see in general terms what has happen
ed since 1974 If there are no perceptible changes there could
indeed be indications of changes which one may see in years
ahead

No one expects major shifts in policies and strategies in any
country in the course of just three years What one was looking
for was the attitudes of people in responsible positions towards
the various components of human settlement problems and the
impact of the changes if any as reflected in policies programmes

and projects taken up for implementation. The study reveals that people in India are much more aware of the problems of human settlements and the complexities thereof today than they were, say, four years ago. To what extent this awareness has influenced the policies—sectoral and spatial—is a subject which is amenable to various interpretations. But on the whole, the report does bring to the fore the growing concern of the government and the peoples of India about deteriorating conditions in their urban and rural settlements.

Organization

The volume consists of two sections Section A . *The Issues* consists of four chapters—National Development Trends, The Human Settlements System, The Quality of Life in Urban Settlements, and The Quality of Life in Rural Settlements. Section B *The Responses* consists of six chapters—Human Settlement Policies and Strategies, Policies on Land and Environment, Shelter, Infrastructure and Services, Resources and Technology, Institutions, Management and Public Participation, and, finally, Conclusion

R.P MISRA
General Editor

MYSORE,
15 April 1979

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Introduction

SIDDAIAH ARRIVED in Mysore City in April 1975 from a village 30 km away. He had brought along with him only a few aluminium and earthen utensils, a few clothes and a few rupees besides his family, consisting of his second wife and three children by both wives, all below 15. His first wife was no more. He was a small farmer back in his village owning about 3 acres of land which had gone effectively to other hands from whom he had borrowed paltry sums on different occasions. The failure of the monsoon that year gave him no choice but to follow the advice of his distant relative to move to Mysore. It was Siddaiah's relative in the building industry in Mysore who helped him settle down in a hut on the construction site of a house. He could stay there with his family as a watchman for a pay of Rs 30 per month. He did not have to pay any rent, but he and his wife had to work on the site when there was work and they were paid for that. When there was no work at the site he could go out for work. A day's work used to fetch him Rs 5 and his wife Rs 3. His first son was already bonded to a household in the city for Rs 100. Siddaiah thus hoped to move back to his village one day and redeem his lost property.

He lost all hopes of returning to his village after four years of stay in the city. He still worked as an unskilled worker on construction sites for almost the same wages as he did four years earlier. He had moved his hut more than once as per the rules of the game. He had had to leave a site as soon as the construction was over and hunt for another prospective builder. Now he occupied a site where construction would begin soon. Siddaiah may never return to his village, nor will he be able to settle down on a permanent place in Mysore. He will probably end up in a slum. He may even be worked to death erecting houses for other privileged fellow citizens. His children may also have to follow a similar life. His wife will continue to work

with him and cook a meal every day for the family made of jowar or other cheap grain She will bear children again and deliver them in the huts as she has already done before, without the help of modern medicine. The children will also be under-nourished, ill clothed, ill-sheltered and be street 'urchins' and never see a school However, the 'problems of the city'—inadequate drainage, intermittent water supply, transport, housing—will never affect them These are not problems for the likes of them, whose existence itself is a day to-day prolongation of the tenacity to work and to find work. But who bothers? Not Siddaiah—as he knows *it is futile*. He does not even care to recognise that the city to which he belongs now, or the village to which he belonged once, and society at large have all failed to create an adequate 'habitat'—an environment in which his family can live and grow healthily—from which he could also benefit

There are hundreds of thousands of Siddaiahs in the cities of India working not only in the construction sector but in all organized and unorganized sectors, as porters, petty traders, coolies, sweepers, peons, thieves, beggars There are illiterates, schooled ones, and degree holders, all struggling for a marginal existence, living in slums, in *bustees*, one room tenements *chawls* or sleeping on pavements or in shop fronts. There are bachelors and men with very large families. These are not the only urban Indians, however There are also millions of the so called middle class—teachers, clerks, small businessmen, industrial workers and the like—who also struggle to eke out a living pitted against the hostile, thrifty urban environment. But they are not as mute as the first category and always have the habit of complaining about inadequate housing, inadequate water, schools and hospitals, increasing prices, unemployment, and transport problems Then there is a small group of privileged ones who have a high level of living and therefore the thinking to complain about foul air, water pollution and made quate road space for moving their vehicles All these urban Indians have millions of 'cousins' in the villages who have the locational disadvantage (or advantage) of being away from this culture. Many of them, nonetheless, have the propensity to move to cities and beget similar or worse destinies—of the poor, desti-tute, middle class

Many explanations could be heard, and many solutions, ranging from ideological to purely technical ones, can be given The basic fact, however, remains that from Kerala to Jammu and Kashmir or from Maharashtra to West Bengal the quality of life—we mean only the material physical quality here—deteriorates day by day irrespective of increases in GDP or per capita GDP in cities as well as in villages This is not a unique phenomenon in India Similar stories are reported from all countries both developing and developed—with but a little difference in dimensions It is the poor ones who suffer most in both situations and there will always be a privileged group which escapes least hurt, be it the problem of unemployment, malnutrition, housing or environment Some may dismiss this as a structural problem connected with the capitalist mode of production This argument is, by and large, true as far as the differential suffering is concerned, but to argue that the whole problem of the deteriorating quality of life is connected with the capitalist mode of production is pushing things a little too far There is at least a part of the problem—indeed not completely a political or purely technological—which has something to do with the whole management of the human habitat systems An element of ignorance in the understanding with regard to the natural and social processes as well as past and present follies and mistakes with respect to the management of development is at least partly responsible for much of the deteriorating quality of life Basically, the physical quality of life is related to the provision of an adequate habitat—an environment in which man—who is also a part in it, as an individual and as part of a group—can survive and grow physically and culturally The problem of Siddaiah and people like him is essentially one of inadequate habitat affecting the growth of their families economically and culturally

Habitat and Human Settlements

The human habitat is a concept which came into usage very recently The term became more popular after the United Nations Conference on Human Settlements held in Vancouver, Canada in 1976 generally referred to as Habitat 76 The concept is borrowed from the biological sciences where it means a

physical environment which is conducive to the growth and multiplication of a particular living organism or species It sums up a condition for healthy growth The concept as used intends to refer to human habitat also has a similar meaning, but is used in a broader sense because material inputs from physical environment alone are not enough for the growth of man, and also because man has devised a number of socio-technic ways to adapt to and live in different physical environments It is to be noted however that the concept could be interpreted differently depending on the direction from which we approach it. For instance, the concept may be viewed in one way by the ecologist, and quite differently by economists, architects or geographers

Such a broad concept as habitat, should necessarily relate to the concept of the quality of life, especially the material quality The quality of life is a condition which depends on how well the needs of life are satisfied Human life has material as well as non-material—social, cultural and spiritual—needs, but to make a concept of any practical utility, it has to be centred around tangible things such as material needs and at best could include social needs Spiritual and metaphysical aspects are highly intangible and have to be kept out of this discussion. We would rather limit ourselves to the material needs and the socio-technic ways to satisfy them

If we view the concept from this angle, habitat has three aspects

1   *The natural environment and the ecological system* with its intricate and innumerable ways in which it could provide for the support of life including human life

2   *The technological artefacts* which are used to draw benefits from the natural environment to satisfy man's needs. These technological artefacts may generally be treated as the man made environment which also includes built environment

3   *Man and his social organizations* which manage to use the natural environment in order to satisfy the material needs, including the direct consumption of natural goods, and processing of natural goods through technological process, and artefacts This also includes incidentally, the institutions to satisfy the social and cultural needs and the political ones for management

concept of habitat is broader and therefore more ambiguous than the concept of human settlement.

There is no consensus, however, even on the concept of human settlement. For example, the UN Conference on Human Environment defined human settlement as [*]

A complex organism composed of many man made elements performing complex functions and set within the natural environment Man made and natural elements together comprise the territorial habitat within which man lives, works, raises his family and seeks his physical, spiritual and intellectual well being [1]

The United Nations Environment Programme views human settlements

basically as eco-systems, composed of natural and man made elements which interact in complex ways within their environmental dimensions [2]

It could be observed that the first definition stresses the built environment, while the second stresses the natural environment Both consider human settlements largely as physical systems only This vagueness will not reduce the practical utility of the concept. We will not go into a hairsplitting definitional exercise here By usage we all have a generally agreed notion what human settlements are They could, as we know, be conceived as physical entities which are in fact manifestations of social organization, created for the purpose of using and exploiting nature for the benefit of man The physical aspects are more visible and form the important elements contributing to the quality of life within human settlements, but the social organization, the governance system, and the social structure influence the formation, maintenance, and use of human settlements considerably and significantly as the accompanying diagram suggests We would, for the purposes of this book, take a view similar to that of Doxiadis, that human settlements comprise not only of nature, shells and networks (physical environment) but also of society and man [3] In other words, human settlements in developing countries comprise and are formed by the continuous interaction between the household, governance system, built environment, society and nature. We replace the

Fig 1
Doxiadis' Concept of Human Settlement
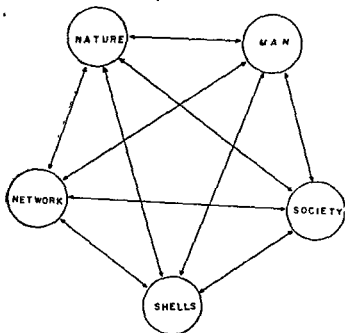
Fig 2
A Concept Model of Human Settlement Development
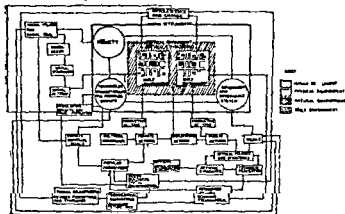
concept of man in the Doxiadian definition by households, as
we hold that it is not individual man, but households which
form the basic decision making units We club networks and
shells together under 'built environment' as we feel that this
would take care of many items which are not covered by 'shells'
and 'networks' We view 'society' different from government
or governance system as in many developing countries the
'government' need not always reflect or imbibe societal values
and aspirations And governments are often powerful elements
in their own right with independent decision making faculties.[4]

Habitat 76

If the experience of the past is any guide action to improve
the quality of life has to be focussed at the lowest level of
human organization i e the family and not at the national
level alone But this level is too small to coordinate and
therefore, as a compromise, the next visible level could be the
human settlements Realising this the United Nations Conference
on Environment held at Stockholm in 1972 recommended the
organisation of a similar conference on human settlements This
conference took place in May-June 1976 in Vancouver, Canada
and was called Habitat 76 The conference noted that

> The condition of human settlements largely determines the
> quality of life the improvement of which is a pre-requisite
> for the full satisfaction of basic needs, such as employment,
> housing, health services, education and recreation [5]

and recognised also that

> The problems of human settlements are not isolated from
> the social and economic development of the countries and
> that they cannot be set apart from existing unjust inter
> national economic relations [6]

The conference called upon the national governments and
the international community to take immediate steps aimed
at the mobilisation of economic resources, institutional changes,
and international solidarity by

(a) adopting effective human settlement policies,

(b) creating more durable, attractive and efficient settlements recognising the special needs of the disadvantaged groups to ensure the provision of health, education, food and employment,

(c) creating opportunities for effective public participation,

(d) developing innovative approaches to settlement development programmes through appropriate use of science and technology and adequate financing,

(e) utilizing effective means of communication for exchange of ideas and experiences,

(f) strengthening the bonds of international co-operation,

(g) creating economic opportunities for full employment where under healthy and safe conditions, women and men will be fairly compensated for their labour in monetary, health and personal benefits

It was further suggested that it was possible to achieve all this by using human settlements as instruments and objects of development The solutions to human settlements were to be conceived as an integral part of the development process of individual nations and the world community.

The conference recognised that the political and socio-economic conditions differ from country to country and therefore, problems of human settlements require differential treatment However, sixtyfour specific recommendations were made for to be acted upon by the national governments on a priority basis These recommendations were endorsed by more than one hundred and forty member nations and organizations of the United Nations A majority of the recommendations, however, pertained in the main, to the problems of urban settlements The rural problems of the developing countries of Asia in particular did not get adequate attention Nonetheless, attention was given to the varied aspects of human settlements generally, viz, national human settlement policy, strategy for human settlements development, land and environmental management, public participation, institutions and management, and so on There were three broad principles which underlined all the recommendations and deliberations made at Habitat 76 which become

clear if one goes through the proceedings of the conference in detail These are

(1) an integrated approach to the problem
(2) a concern over the questions of equity and distributive justice and
(3) a concern for the underprivileged sections of society

It is necessary that the problem of human settlements be seen from the point of view of the socio-economic development of the country, and that the fruits of such development should be distributed more equitably Inequitable distribution of the fruits of development within a community constitutes a major problem It thus becomes imperative to give special care to the underprivileged and weaker sections Habitat 76 points to the fact that this could be better done if the development policies focus on human settlements and their improvement

Why this Book on India?

Now the question What happened after Habitat 76? What are the effects of the Conference? On the positive side it created a lot of talk and discussion and a new awareness at least in some quarters UN has created a Habitat Foundation and a Centre for Human Settlements International financing agencies are also championing the cause But the dust raised by Habitat 76 seems to have settled down without much visible changes in the national policies Few countries seem to have taken a serious second look at the recommendations they made at Vancouver Some countries picked up a few ideas The general reaction is that all these are but part of an international set of gimmicks, which sometimes comes in handy as a political rhetoric We do, however feel that though some of the recommendations are not of much significance or they are not viable politically especially in developing countries like India the message behind them is worth noticing And it is also true that this message is not completely ineffective In the policies of many countries including India, this message has been playing significant roles indirectly if not directly The purpose of this book is to assess the national policies in India which have a

direct bearing on this message viz, proper care of the human habitat in an integrated way. Before doing that we would also make a quick analysis of the present problems on human settlements in India

Habitat India

India is one of the largest countries of the world. It covers an area of 3 28 million square km stretching over 3200 km north south and 2900 km east west. In this two per cent of the earth's land surface live over 14 per cent of the people of the world. They live in a variety of social, economic and physical conditions. Over five thousand years of human occupation and activities including about two thousand years of agriculture and a century of modern industrialization have changed its face and its physical environment. Physically, India contains a variety of climates, soils, flora and fauna. Richness and variety of natural resources and environmental conditions ranging from rare earths deposits, thick tropical forests, oil, coal, iron and other metallic deposits, to desert conditions, drought prone and flood prone areas, as well as over 6000 km of coastline have provided a base for diversified economic activities. Arrivals of migration streams from distant lands, more than three thousand years of history consisting of struggles of different religions and groups to gain political power and over two hundred years of colonial rule, all threaded subtly by a secular but Hindu dominated evolution, has given rise to a diversified culture in India. Socially, the country has developed traditions and cultures which differ from each other. Political history has played a pre-eminent role in the present day economic and social conditions in India. "Had historical processes worked a little differently, India would have been a subcontinent in all respects, including political. It would have been another Europe or Africa, with several countries, big and small, attempting in the twentieth century to form an Indian common market"[1]

The diversities of this land are reflected in widely differing human settlement and habitat conditions. Though still a rural country, its total urban population is larger than the total population of most developing countries. There are thoroughly scattered homestead patterns such as in Kerala and

in Assam, very small nucleated settlements in mountainous regions, a variety of villages and towns of differing sizes, structure and function ranging from small hamlets to some of the world's largest and most problematic million cities There are settlements and areas within a settlement of affluence as well as poverty People live in impersonal and inhuman environments created by modern technology as well as in the dark alleyed, dirty slums and squatter settlements created by economic and social processes aided by man's ingenuity to improvise Many live close to nature and yet far away from its bounty and some live higher away from nature, just swallowing most of its bounty

After the independence of the country in 1947, attempts have been made to improve the living conditions and quality of life of the population. Five Five Year Plans were implemented and the sixth one was started on 1 April 1978 During the last thirty years of planned development, the country has seen a number of experiments with different policies. The growth-oriented spaceless policies—and the resultant economic centralisation, rapid growth of larger cities and stagnation in a majority of rural tracts—of the earlier plans has been slowly giving way to decentralised welfare oriented ones However, the process is not yet complete to give a due thrust to a habitat-centred development policy The interest generated in the country towards the UN Conference on Environment held in 1972 and the Habitat 76 Conference aptly speak for the enthusiasm of the Indian intelligentsia to catch up with new ideas These ideas as well as the on going debates and confusion on rural development add new dimensions to development planning in India There are a great many planners in India, probably a substantially higher percentage compared to many other developing countries who advocate micro planning approaches more or less in consonance with the Habitat concept However, clear policies are still somewhere on the horizon behind the dark clouds

This book tries to document the emerging trends in developing policy in the light of the Habitat movement This book was attempted in a very short time considering the vastness and variety of the country, only secondary and tertiary sources of information could be used All the major trends in policies

and strategies at the national level have been covered nonetheless, there may be a few omissions especially of the attempts at lower levels of administration This has happened mainly due to shortage of time The final decision to hold Habitat 76 came in mid 1974 and the member countries and international organisations started preparing only then for this historic event Our analysis launched concentrates mainly on policies and programmes after 1974

R P MISRA
B S BHOOSHAN

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2 UNEP, Advisory Group Meeting on Human Settlements Technology (Draft Report) Nairobi 1975 p 3

3 See C.A Doxiadis *The Human Settlements that we Need*, Tata McGraw Hill Publishing Company Ltd New Delhi 1976 Dox ad s was a pioneer who popularised the term Human Settlements and initiated interdisciplinary interest

4 For details of this model see Chapter 1 of R.P Misra and B.S Bhooshan *Human Settlements in Asia Public Policies and Programmes*, Heritage Publishers, New Delhi 1979

5 United Nations *Report of Habitat United Nations Conference on Human Settlements* New York, 1976 p 2

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SECTION A

THE ISSUES

1

National Development Trends

THERE ARE three major trends in India which have implications in the habitat policies. They are (1) the continuous population growth, (2) the performance of the economy, and (3) spatial imbalances in development and population distribution.

DEMOGRAPHIC TRENDS

One of the compelling imperatives of planning and development in India is the galloping population growth and their continuous concentration in some areas. If nothing else, this is a factor that will not permit the people, their leaders or administrators to relax. It is true that the poorer 80 per cent of the population has been rather quiescent, by and large it is being worked to death as landless labour, construction workers, road builders, domestic servants, etc. But it is possible that the growth of numbers, if nothing else, will change this situation.

It is estimated that 600 million people were living in India on 1 July 1975. The 1971 census figure was 548 million. The population grew by 24.8 per cent in the last censal decade which was 3.28 per cent more than the growth rate of the previous decade (1951–61). The population growth has been galloping upwards from 1921 onwards in India. A variety of socio-economic factors are responsible for this, but they could be summarised as a condition in which an 'agricultural growth rate' and an 'industrial death rate' coexist. (See Table 1.1 and 1.2)

Population planning in India has been only a partial success if not a failure for it lacks a social rationale. For the very poorest, each child that survives is a potential economic asset. In any case, since there is no question of preparing the

Table 1 1 : Growth of population

	Population (Census estimates)	Decennial growth		Population (Mid year estimates)	Annual growth
	Mn.	%		Mn.	%
1911	252.1	5 7	1971	551 0	2.2
1921	251 3	−0 3	1972	562.7	2.1
1931	279 0	11 0	1973	574 4	2.1
1941	318 7	14 2	1974	586.3	2.1
1951	361 1	13 3	1975	598 1	2.0
1961	439.2	21 6	1976	609.5	1 9
1971	548.2	24 8	1977	620.3	1 8

Note. Census estimates are as on 1 March of the year except in the case of 1971 which is on 1 April. Mid year estimates are as on 1 July.

Table 1.2 : Birth and death rates in India

Decade	Per thousand		Expectation of life at birth	
	Birth rate (estimated)	Death rate (estimated)	Males	Females
1921-30	46.4	36.3	26 91	26.56
1931-40*	45.2	31.2	32.09	31.37
1941-50	39 9	27.4	32.45	31 66
1951-60	41.7	22.8	41 90	40.60
1961-70	41 1**	18.9**	47 10**	45 60**

* Unofficial estimates.

** Provisional, based on one per cent sample data.

Table 1 2(a) : Expectancy of life in India

	Expectation of life					
	1941-50		1951-60*		1961-70**	
	Males	Females	Males	Females	Males	Females
0	32 5	31 7	41 9	40 6	47 1	45 6
10	40.0	39.5	45.2	43 8	49 0	48.1
20	33 0	32.9	37 0	35.8	40 2	39 7
30	26 6	26.2	29 0	27 9	31 9	31 7
40	20 5	21 1	22.1	22 4	24 7	24 7
50	14 9	16.2	16.5	17 5	18.3	18.9
60	10 1	11.3	11 8	13 0	13.0	13 4

* Census of India, 1961

** Provisional, based on one per cent sample data.

child educationally or otherwise for a career, children are not much of a burden to the poor For the upper classes also who complain of shortage of domestic workers or farm workers, a plentiful supply of labour power at low wages is a desirable state of affairs Thus, unless there is a rational socio-economic order or at least a practical plan for them—a policy of population planning cannot be formulated credibly and convincingly

Family planning does make sense for the middle classes, where it has always been practised in some form or other Similarly, when the village was an organic agricultural and artisan community, its population was also controlled But the old community ties have broken down and in the new, normless society, population control can be enforced either violently—through force—or only after the creation of a new community It is undoubtedly true that with the spread of education and the rise in the standards of living the population tends to decline, but these are distant prospects Another significant aspect of the demographic movement in India is that the proportion of women in the population has been declining What this means for the future of population growth remains to be seen The age structure of the present population is also very broad based, showing the possibility of increased growth in the future, which looks gloomy to the planners and administrators of the country If the present trend continues India would more than double its population by A D 2000, it is estimated

In 1975 India had over 600 million people distributed in 5,78,842 settlements of different types and sizes Presuming that there are no substantial changes in the number of settlements after the 1971 census, over 480 million persons live in 5,75,721 villages ranging in population size from less than 100 to over 5,000 The remaining 120 million live in 3121 towns and cities ranging in population from 5,000 to over 5 million By the turn of the century, India would have around 1 000 million people next in size only to China

Although the rate of growth of population is expected to decline from 2 48 per cent per annum in 1971 to 1 8 per cent in 2001, the absolute growth in population would even then be large enough to increase the density of population in India from 177 persons per sq km in 1971 to 288 in 2001. Thus,

the man land ratio will become even more adverse Unless
there are commensurate changes in technology and the expan
sion of non farming occupations, the percentage of people
falling below the poverty line will increase catastrophically
The phenomenal absolute increase in population would mean
a much higher dependency ratio At present 270 million people
are classified as dependents This number would increase to
about 400 million The labour force would expand from 196
*million in 1971 to 390 million in 2001, for whom work has to be
found* This immense weight of population is a constraining as
well as imposing condition which any realistic habitat policy
has to take into account.

Growth has not been uniform in all the parts of India, due
to migrations as well as differences in the natural growth aris
ing from the varying demographic and socio economic
structure For example, *while kerala had a growth rate of
25 89 per cent during the last decade, the neighbouring state of
Tamil Nadu grew only by 22.01 per cent Assam had a growth
of 36 per cent during the same period and Madhya Pradesh 27
per cent.*

The pressure of this population growth is reflected in the
density The average density of population per sq km in
1971 was 177 The density of population varies from region to
region and state to state depending upon resource endowments
and development activities It is higher in the plains and river
valleys and lower in the mountains, plateaus and arid and semi arid
regions

It varies considerably from state to state, being as high as
549 in Kerala and as low as 29 in Sikkim and 6 in Arunachal
Pradesh

The changes in the density of population between 1921
and 1971 are given in Table I 3

These densities are very high considering the present state
of resource development If one takes into account the cultiv
able area and the population concentration the situation is
appalling *The rice growing areas comprising the Ganga
plain, the coastal plain of Kerala the Hooghly basin West
Bengal and the Mahanadi Delta of Orissa are over populated*
The rural population in these areas is very much in excess of
the carrying capacity of the land In all these areas land is

Table 1 3 Changes in density

Year	Density per sq km
1921	81
1931	90
1941	103
1951	117
1961	142
1971	177

Note Density worked out after excluding the population and area figures of Jammu and Kashmir

the main resource base and even if the productivity of land is increased by better care and management, the situation is not likely to improve partly because the existing population is already at the subsistence level and partly because the growth rate of the rural population is fairly high All the densely populated areas are not over populated nor are the lower density areas all underpopulated The increase in density in most parts cannot be achieved without impairing or degrading the habitat conditions which are already strained

Population pressure and the past patterns of industrialisation and urban development have resulted in the internal movement of the people The metropolitan regions, despite serious housing and community problems attract large numbers of migrants from the surrounding rural tracts However, migration from rural to rural remained very high compared to any other type of migration This trend is declining and the rural to urban migration is catching up It was found generally that high literacy, low economic development and increased pressure on the land were the main causes for out migration. In migration to cities was encouraged by the dependence on agriculture, social customs and the increasing pace of industrialisation (See Table 1 4)

Migrant population constitutes an important component of urban population in India The data available reveals that 30 to 60 per cent of the population of Indian cities has been residing in cities for less than twenty years The larger the city, the greater the migrant component of the population Cities with a population of a million or more have a migrant popu-

lation of over 50 per cent, whereas in cities of 300,000 or less, migrants constitute 30 to 40 per cent of the total population

Table 1 4   Per cent life-time migration streams in India
1961 & 1971

Year/Type of Migration Stream	Short-distance within the district	Medium distance (within the state)	Long-distance (between states)	Total
1961				
A. Rural to Rural	57 67	12 09	3 97	73 73
B Urban to Rural	1 97	1 12	0 48	3 57
C Rural to Urban	6 12	4 89	3 63	14 64
D Urban to Urban	2 06	3 31	2 69	8 06
Total				100 00
1971				
A Rural to Rural	35 63	11 72	3 91	71 26
B Urban to Rural	2 53	1 59	0 80	4 92
C Rural to Urban	6 47	4 98	3 55	15 00
D Urban to Urban	1 48	3 84	3 14	8 82
Total				100 00

Source Atreyi Chatterjee   Some Implications of the Future Trends of Urbanisation

Cities which offer substantial industrial employment attract larger numbers of rural emigrants   Important among these cities are Bombay, Calcutta, Madras, Kanpur, Ahmedabad, Hyderabad, Dhanbad and Singhbhum. Cities like Delhi, Bangalore, Baroda etc where non factory employment is substantial attract a high proportion of migrants of urban origin Included in this are transport and communication service establishments or manufacturing activities requiring a highly skilled labour force As regards the quality of the migrant population 44 per cent is illiterate, 14 per cent literate, 23 per cent with high school and lower education and the remaining 19 per cent with bachelors or higher degrees Among the female migrants, 57 per cent are illiterates, only 2 per cent

have university education A fairly large proportion (41 per cent) of migrants is below 34 years of age

In other words, the rural areas are continuously being drained of their best men. This is mainly because the rural areas are not able to sustain them there with adequate employment or a decent life This should not suggest that life in urban areas is any way better Habitat conditions in many urban centres are unbearably worse The major factor which contributes to the migration is that the city in India seems to hold better promises of a minimal subsistence than the rural areas in the perception of unemployed rural youth—educated or illiterate

ECONOMIC TRENDS

Inflationary trends, unsteady and increasing prices, galloping unemployment, stark interpersonal disparities in incomes and consumption, an increasing majority of the people below the poverty line, increasing capital output ratio, limited opportunities and viable projects for investment, continuous concentration of economic power in a few hands—these are the characteristics of the Indian economy in recent years which make many Indian economists view it as a 'falling futureless economy'[1] Agricultural production in the country has been substantially increasing, no doubt, but the performance of the industrial sector has been mixed and the total increase in the income has been neutralised by the increasing population Some core sectors like coal, electricity, steel and fertilizers have been registering substantial growth, while certain subsectors like cotton textiles, yarn and some consumer durables recorded a decline in the year 1975 An estimate of the Central Statistical Organisation (CSO) for the year 1975-76 has shown an increase of 8.8 per cent in India's national income over the previous year, which was a record performance in the last 15 years The overall growth pattern in the same period has been quite discouraging (See Table I 5)

The Net National Income for 1977-78 is estimated at Rs. 2 3 4000 million (at 1960-61 prices) and the per capita income was Rs. 375 (Rs 1130 00 at current prices) The per-

formance of the per capita income has been poor compared to the national income in the last 15 years

Table 1.5 Trends in national income

	National Income (Rs Crores)			Per Capita Income (Rs)		
Year	At current prices	At 1960-61 prices	% yearly change in real net product	At current prices	At 1960 61 prices	% yearly change in real per capita income
1960-61	13263	13263	—	305 6	305 6	—
1961-62	13987	13729	3 5	315 0	309 2	1 2
1962-63	14795	13933	1 9	325 9	309 2	-0 3
1963 64	16977	14771	5 6	365 9	318,3	3 3
1964-65	20001	15885	7 5	422.0	335 1	5 3
1965-66	20637	15082	-5 1	425.5	311 0	-7.2
1966-67	23848	15217	0 9	481 8	307.4	-1,2
1967-68	18054	16463	8 2	554 4	325 4	5 9
1968-69	28627	16939	2 9	552,3	327 0	0 5
1969 70	31606	18016	6 4	597,5	340 6	4 2
1970-71	34462	19096	6 0	637 0	353 0	3 6
1971 72	36332	19298	1 1	657 6	349 0	-1 1
1972-73	36943	19048	-1 3	701 6	337 1	-3 4
1973-74	49396	20143	5 7	856,1	349 1	3 6
1974-75	58137	20183	0 2	988 7	343 2	-1 7
1975-76	60293	21952	8 8	1004.9	365 6	6.6
1976-77	62700	22400	8 7	1020 0	365 0	-0 1
1977 78	70800	23400	4 5	1130 0	375 0	2 7

Source Manorama Year Book 1978 1976-77 & 1977 78 figures are from Statistical Outline of India, 1978 (given in brackets)

The economy has been undergoing very little structural changes (See Table 1 6) The structural change is brought out by the composition of Net National product The share of the primary sector declined from 52.2 per cent in 1960-61 to 42 7 per cent in 1975-76 This fall is entirely due to the decline in the percentage share originating in grain and food production, the relative shares of forestry, mining etc , have shown marginal improvements The contribution of the secondary sector to the overall domestic product increased slightly from 19 1 per cent to 22 8 per cent. It was the tertiary sector which grew

substantially It now accounts for as much as 34 5 per cent compared to about 29 per cent in 1960 61 In other words the service sectors like transport, public administration and defence have grown substantially, which is also suggestive of the causes for the inflationary trends

Table 1 6 *Composition of net domestic product*
(at 1960 61 prices)

Rs Crores

Industry	1960-61	1974-75	1975 76	% share in 1960-61	% share in 1975-76
I *Primary*	6965	8359	9423	52.2	42 7
1 Agriculture	6580	7699	8712	49 3	39 5
2 Forestry and logg ng	174	292	311	1.3	1 4
3 Fish ng	77	123	130	0 6	0 6
4 Min ng and quarrying	134	245	270	1 0	1 2
II *Secondary*	2549	4748	5023	19 1	22.8
5 Manufacturing	1856	3439	3596	13 9	16.3
6 Construction	625	1073	1160	4 7	5 3
7 Electricity gas water supply	68	236	267	0 5	1 2
III *Tertiary*	3821	7174	7599	28 7	34 5
8 Transport storage and communication	576	1101	1213	4.3	5 5
9 Trade hotels and restaurants	1294	2253	2392	9 7	10.9
10 Banking and insurance	160	348	394	1 2	1 8
11 Real estate, ownership of dwellings and bus ness services	392	506	514	2 9	2.3
12 Publ c administration and defence	538	1592	1672	4 0	7 6
13 Other services	861	1374	1414	6.6	6.4
Net domestic product at factor cost	13335	20281	22045	100 0	100 0

Source Manorama Year Book 1978

Agriculture continues to be the major economic activity in the country as a whole Whereas cultivators form more than forty per cent of the total population agricultural labourers alone constitute a whacking 26 33 per cent On the other hand, large scale industry has only 5 94 per cent of the workers—a

very small proportion indeed Thus, nearly 70 per cent of the labour force is engaged in agricultural operations (See Table 1.7) and there has been very little change in the past

Table 1 7 · Percentage distribution of workers by industrial categories, 1971

Main Activity	All India		Rural	
	Total workers (in million)	%to total	Total worker (in million)	%to total
I. Cultivators	78.2	43 34	75.5	51 59
II. Agricultural Labourers	47.5	26 33	45 6	30 71
III Livestock, forestry, fishing, hunting and plantation orchards and allied activities	4 3	2.38	3 7	2 53
IV Mining and quarrying	09	0.51	0 6	0 41
V (a) Household industry	6.4	3.52	4 8	3 21
(b) Other than household industry	10 7	5 94	3.4	2 29
VI Construction	2.2	1.23	1 1	0 74
VII Trade and commerce	10 0	5.57	3 6	2 44
VIII Transport, storage and communications	4 4	2.44	1.2	0 82
IX. Other services	15 8	8 74	7 9	5 26
Total	180 4	100.00	148 4	100 00

To add to the poor performance of the economy as a whole, unemployment in India is also mounting Until the Sixth Plan, employment generation was not considered as an important factor in the planning process Consequently, none of the earlier Plans could provide jobs for more than sixty per cent of the unemployed at the beginning of the Plans and the new entrants to the job market during the Plans taken together ² The Committee on unemployment appointed by the Government of India in 1970 estimated the likely number of *unemployed persons in 1971 at 18 7 million.* In this 9 million were totally unemployed and 9 million partially 16 1 million of these lived in rural areas and 2.6 million in urban

Raj Krishna estimated in 1971, that the total unemployment in the country was 29 3 million persons in which unemployed were 9 3 million, severely underemployed 12,2 million and underemployed 7 8 million According to him 12 4 per cent of the labour force is unemployed or underemployed In the rural areas total unemployment constitutes 13.2 per cent and in the urban areas it is 8.2 per cent [2]

These average figures however tell very little of the structure of income distribution The past development in the Indian economy, has benefited, by and large, the upper class only and the poor sections are where they were if not badly off The following table (Table 1 8) shows the distribution of personal family incomes in 1964-65 compared to that of 1967 68

Table 1 8   Distribution of personal income

Decile groups of population from bottom (.)	1964-65 Percentage share in		1967-68 survey
	Total disposable income	Personal income	% of total family income
0-10	3	3	1.8
10-20	4	4	3 0
20-30	5	5	3 7
30-40	6	6	4.6
40-50	7	6	5 8
50-60	8	7	7.0
60-70	9	9	9 0
70-80	11	12	11.8
80-90	14	13	16 8
90-100	33	35	36.5

Source   Ministry of Planning, Government of India

Even though these figures are somewhat outdated, one may assume that data about the distribution of personal income, etc presented here are generally valid today No new developments have taken place in recent years to have significantly changed the pattern of income distribution or of consumption expenditure The trend is towards the worse On the whole, it continues pretty much as it has been in the past. The bottom 50 per cent of the population takes care of only

25 per cent of the total income, and the top 30 per cent of the population has 75 per cent of the total income to dispose of Half of the population shares only 25 per cent of the total personal/family incomes while the other 50 per cent shares the 75 per cent The top 10 per cent's share is as much as 35 per cent The top 10 per cent is ten to twenty times better off than the bottom decile The consumption pattern also tells the same story (Table 1 9)[4] In a way, this disparity between the top and the bottom is not too different from that in other capitalist countries But in most capitalist countries in the West, even the poorest do not starve, and in absolute terms, the lowest decile is not that badly off, compared to the state of those in India And the percentage and size of those who are badly off in India are much too not high to cause alarm About 90 per cent of the households have annual incomes which would allow them to live only in the margin of subsistence and destitution The Committee on unemployment appointed by the Government of India in 1970, estimated that 40 per cent of the population are below subsistence level [5]

This dualism is sharper in urban areas than in rural areas, because of the opportunities held out by the city to the illiterate migrant from the rural areas being very meagre The rural disparities arise from the disparities in the access to land and its ownership From the table on the size of agricultural land holdings (see chapter on Land), we find the tremendous disparity as seen in other areas such as personal income and consumption More than 50 per cent of the holdings are less than one hectare which together comprise only 9 per cent of the total land We also find that 3 9 per cent of holdings are over 10 hectares in size and together constitute 30 9 per cent of the land under cultivation A cooperative form of organization of these small, numerous but scattered units has been attempted, in order to make them more economically viable However, the working and achievements of these cooperatives leaves much to be desired

Existing government policies follow and reinforce the socio-economic disparities Government agencies help to build poor houses for the poor and affluent mansions for the well to-do Land reforms have done little to change the agrarian structure in many states The realities of power distribution

are such that not much can be done to alter this pattern, especially as no political party is willing or able to provoke or support a "class war"

Table 1 9 . Shares of different groups of population in total private consumption, 1973-74

Per cent group of population	Rural	Urban	All India
0-5 (bottom 5%)	1 38	1 11	1 31
5-10	1 91	1 61	1 83
10-20	4 79	4 17	4 62
20-30	5 87	5 27	5 70
30-40	6 90	6 36	6 73
40-50	7 98	7 51	7 82
50-60	9 19	8 83	9 04
60-70	10 63	10 44	10 51
70-80	12 50	12.59	12.52
80-90	15 37	15 97	15 47
90-95	9 62	10 33	9 75
95-100 (top 5%)	13 86	15 81	14 70
0-100	100 00	100 00	100 00

Monthly per capita consumption (Rs)

0-30 (average for bottom 30%)	22 90	25 17	23 27
70-100 (average for top 30%)	84 35	113 19	90 64
0-100 (average for entire population)	49 27	62.08	51 85

Source Planning Commission *A Technical Note on the Approach to the Fifth Plan of India 1974-79,* April 1973

Highlights

If anything, these data based on the National Sample Survey (NSS) understate the inequality prevailing in India First, the NSS tends to leave out many of the destitutes who do not have any house on the one hand, and records incompletely the consumption expenditure of the richest on the other.

Secondly, these data cover only consumption expenditure : savings of different groups are excluded. Since most of the saving is done by the upper classes, inequality of income (i.e. consumption plus saving) is wider than indicated by consumption expenditure data alone.

Spatial Pattern of Development C-H

There is no uniformity in either the past developments or in the inter-personal disparity through out the country. There is agricultural prosperity in some regions like Punjab, Haryana, parts of Andhra Pradesh and Karnataka, and so on. Agricultural development underlines habitat patterns, but it is the industrial and tertiary developments that upset the spatial equilibrium in population distribution as agricultural expansion is limited in its capacity to absorb the already existing labour force. Moreover, it is noted that wherever agricultural prosperity has occurred, it has been because of incomes of capital intensive techniques largely upsetting the local labour market. The inter-personal disparity has increased in such areas. Agriculture is also tied up with nature's potential ; this last constitutes a great limitation.

The history of industrial development in India is more that of forced development than of a natural evolution. The British occupation progressively destroyed Indian industries in metallurgy, textiles, handicrafts, building materials, chemicals and pharmaceuticals. No doubt these industries which almost disappeared were mainly village industries and handicrafts, but their disappearance in a relatively short period and in a forced manner has much to do with the present distribution of population and the lopsided settlement pattern. Modern industry is, by and large, responsible for the industrial urban imperialism which has replaced the traditional economic ecology based on village and home based production units. What was initiated during the British period was continued by independent India's planners.[6]

The pace of industrialisation, and industrial diversification and spatial dispersal, has increased since independence. New steel mills, petrochemical complexes, processing industries and other ventures have been built at different parts of the country.

These industries are dependent on the raw materials, the energy sources, and the industrial infrastructure which are found all together only in or near the old metropolitan centres Consequently no major change has occurred in the spatial structure of industrialisation in India Apparent trends towards spatial dispersal are not altogether absent, however

Table 1 10 Level of industrial development
(Factory Sector—Statewise 1974-75)

States	% to total No employed	Average daily employment of factory workers lakh Provn No provisional	Factory % to total number of factories	Fixed capital % to total	Output % to total	Per capita income at current prices
Andhra Pradesh	7 3	748	8 6	5 5	5 6	877
Assam	3 8	516	3 0	3 1	1 5	776
Bihar	5 0	541	3 9	6 6	5 8	718
Gujarat	9 3	1877	10 7	8 7	10 9	1034
Haryana	2 0	1010	1 9	3 1	2 1	1168
Himachal Pradesh	0 4	362	0 2	0 3	0 1	1037
Jammu & Kashmir	0 3	260	0 4	0 1	0 1	836
Karnataka	4 8	1049	6 2	4 4	4 0	784
Kerala	4 0	1095	4 0	3 8	3 1	785
Madhya Pradesh	4 2	571	4 0	5 7	4 3	794
Maharashtra	19 3	2164	16 9	16 7	25 2	1271
Orissa	1 6	324	1 4	3 5	1 5	690
Punjab	2 7	945	3 8	4 6	3 2	1492
Rajasthan	2 0	377	2 2	3 5	2 2	690
Tamil Nadu	10 0	1177	10 8	8 5	9 9	942
Uttar Pradesh	8 4	509	7 5	12 4	6 8	812
West Bengal	14 5	1970	9 1	8 7	11 0	1065
Delhi	1 7		2 6	1 7	1 7	
Total All India (includ ng others)		1000				*989

Source Manorama Year Book 1978

The four states of West Bengal, Maharashtra, Gujarat and Tamil Nadu still lead the other states in industrial development

which is also reflected in the per capita incomes of these states
The maldistribution of industrial development is also reflected
in the pattern of licences issued by the government for new
industrial ventures. Table 1 11 gives a statewise classification
(in percentages) of total and approved applications for licences
during the period 1956-66 and 1974-77

Table 1 11   Statewise distribution of industrial licences

States	Total 1956-66	Approved 1956-66	Issued during 1974-77
Maharashtra	25 38	27 37	24,39
West Bengal	16 31	16 47	8.20
Tamil Nadu	8 96	9 69	10 79
Gujarat	8 66	8 89	9 87
Kerala	3 11	3 62	4 17
Karnataka	2.98	3.26	4.51
Bihar	4 89	5 16	2.18
Andhra Pradesh	3 45	3 32	6.28
Madhya Pradesh	2.85	2.46	3 14
Punjab (including Haryana)	7 45	6 32	9 71
Rajasthan	1.97	1 75	2.58
Uttar Pradesh	7 72	6 71	8.20
Others	5 77	5.22	5 91

Source Report of the Industrial Licensing Policy Inquiry Committee,
Govt of India, July 1969 & Statistical Outline of India 1978,
Tata Services Ltd.

It can be seen from this table that the four industrially
advanced states of Maharashtra, West Bengal, Tamil Nadu and
Gujarat accounted for 59 31 per cent of the applications and
62.42 per cent of the licences issued in 1956-66 period
and similar trends still continue

A microlevel examination of the distribution of all indust-
rial licences, will reveal that there are high concentrations in
some pockets even within the industrialised states.

New ventures have been confined to certain already
industrially advanced regions The interior of the country has
received very little industrial investment Nevertheless
tendencies towards spatial dispersal of industries appear to be
slowly developing For example, the proportion of industrial

workers to total workers in West Bengal, a relatively more industrialized state, dropped from 31 7 in 1948 to 22 5 in 1963 to 14 5 in 1974-75. Similar trends are also noticeable in some other states and a few states have improved their position (Table 1 12)

Table 1 12   Distribution of industrial workers in India

State	Industrial workers as per cent of total workers		
	1948	1963	1974-75
West Bengal	31 7	22 5	14 5
Bihar	6 1	5 7	5 0
Orissa	0 4	1 6	1 6
Maharashtra }	34 7	20 3	19 3
Gujarat }		9 2	9 3
Tamil Nadu }	10 3	7 6	10 0
Andhra Pradesh }		5 0	7 3
Uttar Pradesh	9 7	7 6	8 4
Punjab	1 3	2 8	2 7
Delhi	1 2	1 7	1 7
Madhya Pradesh	3 1	3 9	4 2
Others	1 5	12 1	

Source   A Mitra Levels of Regional Development in India , Census of India 1961 for 1948 and 63 figures Manorama Year Book for 1974-75 figures

The maldistribution of industrial development and the consequent disparities are not completely accidental, they are more by deliberate design. The industrial and technological policy that was pursued by the Indian planners and the legacy of the British were such that this could be the only corollary. The elitist administrators of modern India, 'derived their intellectual inspiration from Western, particularly British, radical, political, economic and scientific ideas So, they had a grand and ambitious vision of an India rebuilt on the model of a socialist order based on capital intensive massive industrialisation''

The vague design, modelled after the West, of the future society was of a technocratic urban industrial one Retracing the path of traditional self reliance from the roots was ruled

out as unpractical, and it was supplanted with new concepts
of industrial self reliance Hope was placed on growth models
of heavy industrialisation leading to concentrated urban
growth A solution was sought in the largeness of industrial
towns, and heavy capital oriented industries, clustered around
already large urban centres This resulted in large scale
migrations to urban areas Larger power projects were needed
to supply energy to the industries and in the process greater
destruction was done to forests and the ecology The shift in
the technological change in agriculture also has lead to the
emergence of a new class structure, and elitist groups and to the
growth of cities

The main point to remember is that it was not the socio-
environmental necessity or rural inefficiency that warranted
this pattern of investment in India to produce the urban
structure and the socio-spatial organization that we have
today, it was due to the elite decision maker's 'tunnel vision'
towards the West Underlying all this was the anxiety to catch
up with the West It is also true that international geopolitics
and geoeconomics forced countries like India to fall into the
western technological trap But we must admit that we too made
a little effort

SUMMING UP

The trends discussed in this chapter have the following
implications

1 The continuous growth of population would put more and
more pressure on the human settlement system Unless
very bold steps are taken the heavy concentration in metro-
politan areas is bound to increase If the population
doubles by the turn of the century, the size of all the
settlements will either have to be doubled, or an equal
number of new settlements of similar divisions have to be
planned, or, most of the smaller settlements have to become
considerably larger to say the least All these alternatives
mean tremendous investment in settlements if the condition
of settlements is to be prevented from further deterioration.

2 The economic trends are discouraging which indicate grim
prospects of additional investment in the settlements

development sector Construction has a high employment potential, but it cannot solve India's economic problems

3 The structure of the economy is dualistic Income differences between the top strata and the bottom strata are alarming An Indian household does not live by wage income alone, it receives and could continue to receive other forms of income such as free services and amenities Provision for these and appropriate pricing policies could make a considerable impact on the differences in the overall consumption of goods and services Such programmes, the basic needs programme for instance, form an important dimension in habitat policies

4 The spatial imbalance has to lead to diffusion policies which in turn would have to be a dimension in the habitat policies

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6. For details of this argument *see* R P Misra & B S Bhooshan ' Rurbanisation in *Seminar*, No 215 July 1977

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2

The Human Settlements System

A WIDE RANGE of human settlements are to be found in India. They vary in size, structure, morphology and economy We have single dwelling settlement units such as the homesteads in Kerala and high density metropolitan cities like Calcutta or Bombay There are rural areas showing high social indices of urban population as well as pockets in metropolitan cities showing rural characteristics

The human settlement system in India consists of three major types urban, rural and tribal.

URBANISATION TRENDS*

The Census of India reported in 1971 that about 80 per cent of the people of India live in rural areas Of the 19 91 per cent of the population residing in urban centres, at least 1 2 per cent lives in towns which are nothing but large villages. This percentage is very small indeed, but, when we look at the urban population in comparison to the population data of other countries, we get a different perspective of the situation As given in Table 3 1, the total urban population of India in 1971 amounted to about 109 million. This is more than the total population of any developing country of the world except China and Indonesia It is one third of the total population of Africa, and of North America, about half that of the USSR, one fourth of the whole of Europe, and seven times that of

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* According to the Census of India, a place becomes urban, if it contains more than 5 000 population more than 75 per cent of which are engaged in non-agricultural occupation and the density is more than 1,000 persons per sq km. Of course there are exceptions.

Australia, New Zealand and the related islands put together. Leaving aside China, India has the third largest urban population in the world, the first and second being the USA and the USSR

Table 2 1   India's urban population, 1901 1981

Year	Total urban population	Increase in millions	Per cent increase
1901	25 85	—	—
1911	25 94	0 09	0 3
1921	28 09	2 15	8 3
1931	33 46	5 37	19 2
1941	44 15	10 69	33.2
1951	62 44	18 29	41 4
1961	78 94	15 50	26 4
1971	108 90	29 94	37 8
1981	152 00	43 10	39 4

Note. Figures for 1981 are estimated

When the British left India the spatial economy was already highly centralized The pattern of industrialization, infrastructure development and social welfare since independence, therefore, led to increased emigration from rural areas to towns and cities The number as well as the population of class I towns with 100,000 or more population grew rather rapidly The number of class I towns increased from 49 in 1941 to 150 in 1971—a three fold increase Class II and III towns also increased but the small towns decreased in number (Table 2.2), notwithstanding the allowance made for a change in the definition of towns by the Census of India from time to time If we examine the share of the urban population progressively claimed by each class of towns in India, (Table 2 3), we come to the same conclusion

The population of the "million" cities which were five in number in 1951, (Calcutta, Bombay, Delhi, Madras and Hyderabad) increased far more rapidly than the urban population. By 1961, two more cities, Ahmedabad and Bangalore, were added to the original five Kanpur and Pune joined the club by 1971. It is estimated that by 1981, there may be five

Table 2·2 · Number of towns of various classes in India, 1901-1971

Classes	Population	Number							
		1901	1911	1921	1931	1941	1951	1961	1971
Class I	1,00,000 and Above	25	26 4%	29 11%	31 6%	49 48%	76 55%	107 40.8%	151 40.2%
II	50,000-99,999	44	38 -13.6%	49 29%	59 20.4%	88 49%	111 26%	139 25.2%	221 59.0%
III	20,000-49,999	144	158 9.7%	172 8.8%	219 27%	274 25%	374 36.5%	418 34.5%	652 23.2%
IV	10,000-19,999	427	388 -9%	396 2%	479 20%	555 13.5%	675 21.8%	820 21.9%	988 20.5%
V	5,000-9,999	773	750 -2.2%	774 3.2%	849 9.6%	980 15.4%	1,195 22%	848 -30%	822 -30%
VI	Less than 5,000	503	349 9%	627 12.4%	582 -7.2%	479 -17.7%	659 31.3%	258 -54%	287 3%
All Classes		1,916	1,909	2,047	2,219	2,424	3,070	2,700	3,121

Note Decline in the number of towns of a particular class is subsequent years is partly because of smaller towns moving up the hierarchy or because of change in definition of town by the Census of India. Percentages indicate the growth of the number of towns

more cities with a million or more population. Most of these are industrially and commercially important cities

Table 2.3   Per cent of urban population living in various classes of towns in India, 1901 1971

Size Class	Population in	1901	1931	1961	1971
I	1 00 000 or more	22 4	27 4	48 37	52 41
II	50 000–99 999	11 8	11 9	11 89	14 15
III	20 000–49 999	16 5	18 5	18 53	17 36
IV	10 000–19 999	19 1	19 0	13 03	12 04
V	5 000–9 999	20.4	17 3	7 23	5 24
VI	Less than 5 000	6.3	5 6	0 95	0 80

Apart from these giants there are 142 very big cities with a population above 1 00 000 many of which are above the 5 00 000 mark   They are either capitals of states or port towns or industrially and commercially important cities   Most of them cluster around the coasts or in the Ganga plain   There are only a few of them in the central part of India

The medium sized towns (50 000—1 00 000) are mostly those which have grown in the recent past mainly because of their administrative importance or the presence of small industries   There are 221 of them now   A number of new towns will also come in this category   Small towns (10 000—50 000) and very small towns (below 10 000) are mostly market towns (overgrown villages) with predominantly rural characteristics. There are many single function towns in this group such as railway junctions industrial townships etc

The new towns in India are many which were established to house large industries or to house capitals or administrative headquarters of states   The former category include steel towns like Bhilai or Rourkela or coal and lignite mining towns like Neyveli   Most of these towns are planned and contain populations between 50 000 and 2 00 000   Most of them are low density developments, but congestions have got in at some quarters already   Chandigarh and Gandhinagar are two large new towns which are completely planned mainly to locate the state capitals of Punjab and Gujarat   But Chandigarh has been criticised as being wholly non Indian in its appearance as well as structure and is now growing beyond the bounds of rigid

planning into suburbs and slums Gandhinagar never took off, though huge amounts were invested there and government offices have moved in from Ahmedabad which is about 60 km away

A number of satellite towns were also created in India, or are being planned such as Faridabad near Delhi or Marimalainagar near Madras. Bombay is going in for a large venture to create a New Bombay of about a million population across the Thana Creek. The performance of these new ventures is yet to be seen as they have been planned with Western know-how and ideals in mind

From the Table 2.2 it could be inferred that the number of larger towns above a 50,000 population is increasing faster while that of the smaller towns is almost stagnant. The total number of towns is also not increasing very much. This shows little opportunities held out by small towns for attracting population. If such a trend continues, we will have a large number of very large towns with very few smaller centres by A D 2000

This inference could be supported by Table 2.3 as well One can also infer from Tables 2.2 and 2.3 that larger towns are now attracting relatively fewer migrants than before although in absolute terms their share is still very large. At the other end of the scale are the small towns whose number as well as share in urban population is progressively declining There is a clear tendency of intermediate towns with populations ranging between 50,000 to 1,00,000 to grow faster both in number and population. It has also been noticed that very large cities of more than 3,00,000 population still grow very fast. The percentage of people living in smaller towns continues to decline while those in larger cities continue to increase. The above pattern is noticeable at regional levels too (Table 2.4) Except for states like Kerala, Haryana and Rajasthan which do not have larger cities with 1,000,000 or more population, all others show lower rates of growth of class I towns than of class II towns. It may also be noted, that except for Kerala and Tamil Nadu all other states have registered a decline in the population of class VI towns indicating the lack of employment opportunities and other facilities in these towns.

THE HUMAN SETTLEMENTS SYSTEM

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Table 2-4 Statewise growth of urban population during 1961–71 in India in various classes of towns (for selected states only)

States	|	|	Classes of towns				
	I	II	III	IV	V	VI	All Classes
Andhra Pradesh	49.97	99.10	18.76	14.66	34.42	64.35	33.92
Assam	45.00	345.78	0.07	147.54	2.77	-36.61	59.98
Bihar	40.34	53.92	58.57	43.89	1.80	52.25	43.95
Gujarat	49.88	109.16	3.26	46.95	17.23	-41.93	41.00
Haryana	115.31	48.81	24.47	8.43	28.99	-60.66	35.58
Kerala	113.10	22.59	24.33	-25.76	-41.05	219.41	35.72
Madhya Pradesh	90.78	72.38	21.42	27.17	6.78	-41.67	46.63
Maharashtra	90.67	70.04	76.76	10.62	-15.74	-28.87	40.75
Karnataka	66.90	7.49	29.03	1.74	-20.35	-32.66	35.23
Orissa	278.83	-35.48	10.10	49.58	23.24	13.45	66.30
Punjab	32.55	141.19	-5.60	-32.40	-15.57	-43.78	25.27
Rajasthan	49.84	102.49	36.38	3.67	-14.87	-51.84	38.47
Tamil Nadu	60.84	34.97	38.73	28.02	0.42	159.57	38.64
Uttar Pradesh	37.37	14.31	31.20	32.54	17.31	-3.60	30.68
West Bengal	21.68	77.29	4.49	23.72	-16.03	-30.34	28.40
India	51.52	55.80	26.63	23.72	-2.06	-0.29	38.22

Table 2 4 points to wide regional variations in urbanization
The eastern micro region of the country excluding West Bengal
with less than 10 per cent of population living in urban areas,
is far below the national average The central region consisting
of U P , M P and Rajasthan is also below the national average
but far above the Eastern region The Western region consist
ing of Gujarat and Maharashtra is far above the national
average Tamil Nadu in the south is next only to Maharashtra
Andhra Pradesh and Kerala are below the national average,
but Karnataka, with 24 31 per cent of its population being
urban is well above the national average

Fig 3
Location of Class I Towns and their Growth Rate 1961 1971
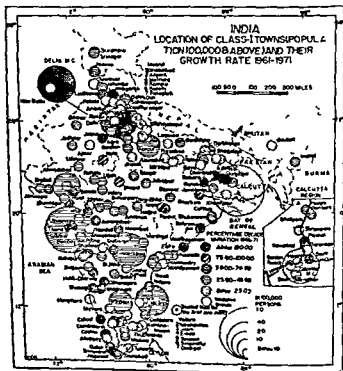
MAIN ISSUES IN URBAN DEVELOPMENT

The Weight Population Growth

Urban growth in India is faster than the population growth This is quite natural considering the low diversity of the economy and the low level of the urban content This would reflect a healthy trend if economy diversification too would be as fast and widespread In that event urban growth would be a result of more and more areas becoming towns and more and more towns becoming larger cities But we have seen that diversification and structural change in the Indian economy has been slow The expansion of employment in the secondary sector has been very slow Whatever changes have occurred have been concentrated in a few regions The increased urbanisation in India is not therefore a product of the diversification of the economy and industrialisation nor is it a result of the ubiquitous increase in the demand for goods and services of urban origin The number of towns is almost stagnant and already existing large places become larger and larger This is mainly because smaller places and villages hold out little opportunities The entire weight of urban growth is thrust on the existing larger urban places which are in fact not in a position to absorb all of it economically or physically This type of urbanisation can hardly be considered healthy

Lopsidedness of Urban Hierarchy

A healthy relation between urban centres and the rural hinterland does not obtain everywhere Urban places are mostly products of the expansion of capitalist economy Consequently growth has occurred mostly in places which are efficient in a capitalist sense and therefore have not played much of a catalytic role in the development of the hinterland Urbanisation has been expanding from top to bottom rather than being thrown up by the surplus growth in the local area Even in areas of agricultural prosperity like parts of Punjab or places like Mandya district in Karnataka State the agrarian change has helped only the top stratum of the rural population. Urban development in such places has been faster, no doubt,

but it has occurred without any strong urban economic base
The tertiary population has increased in such places Further,
even in such areas a few cities have grown very large while
others have stagnated or declined Obviously, this indicates
that these centres work as mechanisms to suck up the rural
surplus generated in those areas to larger urban places The
rural 'kulaks', who assimilate the gains of the green revolution have
more links with urban capitalists than with the rural labour

These strained rural urban links are reflected in the spatial
and rankwise skewness in the distribution of urban population
The small towns are few and far between, moreover, they are
not strong enough functionally or otherwise to make a dent in
the dualistic settlement structure which has come into being
This has led to a further weakening of the rural economy
which has a deleterious impact on the urban economy

The Problem of Expansion and Absorption of Newcomers

This skewness and lopsidedness is reflected in the accen-
tuated economic base of the 2462 towns in India A study
conducted in 1961 showed that of 2462 towns in 1961 47.23
per cent were service towns, 39 69 per cent industrial towns,
and 13 09 per cent were centres of trade and transport 15 6
per cent of the service towns had highly diversified functions
while 32 7 per cent of them had a highly accentuated main
function Among the industrial towns the main type function
was highly accentuated in 48 1 per cent and highly diversified
in 10 8 per cent of towns Among the towns specializing in
trade and transport, 16 3 per cent had diversified functions and
37 per cent had the main type highly accentuated (Table 2 5)
The situation would be the same even now

The urban concentration high accentuation of economic
activity as well as the low capacity of the towns to expand
economically has serious employment implications. Even in
the larger towns employment opportunities in the formal and
industrial sectors do not increase very fast and consequently it
is the informal sector with its highly innovative character which
holds out opportunities, though limited, to the new migrants
Unemployment and underemployment are, therefore, quite
severe in urban areas

Table 2.5 : Functional classification of Indian towns and cities by type and diversification—1961

Diversification of function	Type of town		Trade & Transport	All Towns
	Service	Industrial		
Highly diversified	181 (15 6)	106 (10 8)	114 (35.4)	401 (16 3)
Moderately diversified	293 (25.2)	212 (21 7)	91 (28 2)	596 (34 3)
Main type accentuated	309 (26.5)	189 (19 4)	54 (16 8)	552 (22 4)
Main type highly accentuated	380 (32.7)	470 (48 1)	68 (19 6)	913 (37 0)
Total	1,163 (47 73)	997 (39 69)	322 (13 08)	2,462 (100)

Source : Ashok Mitra " A Functional Classification of India s Towns'" in *Patterns of Population Change in India 1951-61*, by Ashish Bose (ed), New Delhi, Allied Publishers 1967

According to Raj Krishna's estimates there were 10,00,000 unemployed persons in the urban areas in India constituting 2 7 per cent of the urban labour force in 1971. The underemployed were 5 5 per cent (31,00,000 persons) in which 3 1 per cent were severely underemployed Another estimate (by CMIE) gives a much higher figure of 3 1 per cent of unemployed and 6 6 per cent of underemployed in which 3 8 per cent were severely underemployed [1]

Deterioration of Quality of Life

The incapacity of cities to absorb the impact of growth is most evident in the squalor of poor housing inadequate basic amenities and slums According to the National Building Organization, there were 18 54 million dwelling units in the urban areas of India in 1971, occupied by 19 12 million households 5 8 lakh households (3 04 per cent of total) had no separate houses and 2 94 million households (15 37 per cent of total) had no separate pucca or semi pucca houses With regard to the quality of housing, the NBO reports that 12 1 per cent

Table 2.6 : Some components of environmental quality in human settlements
(as repeated by the country report presented at Vancouver)

Type of services	Rural (Percentage of population)	Urban (Percentage of population)	
1	2	3	
*1 Water Supply (March 1974) (i) Protected	4%	83%	
*2 Sewerage (March 1974) (i) Water borne	Negligible	38%	
*3 Drainage	Complete or partially covered Negligible	36%	
*4 Electricity (March 1974)	40%	86%	
*5 Housing (March 1971) (i) Type of houses (a) Pucca (durable)	18.9%	63.8%	In metropolitan cities nearly 23.5% population lives in slums and in squatter settlements.
(b) Semi-pucca (semi-durable)	37.6%	23.5%	

Table 2.6 (contd)

1	2		3	
(c) Kaccha (non-durable)	43.9%		12.7%	
(ii) Over-crowding (population percentage)		Occupancy rate		Occupancy rate
(a) One room	39.6%	4.7 persons per room	41.7%	4.6 persons per room
(b) Two room	28.8%	2.8 persons per room	28.1%	2.9 persons per room
(c) Three room	14.2%	2.2 persons per room	13.6%	2.2 persons per room
				Cities with over one million population
				4.9 persons per room
				2.9 persons per room
				2.2 persons per room
			56.2%	
			23.0%	
			10.0%	

6 Transportation

Indian transport system largely consists of railway and road transport. Railway transport is common to both rural as well as urban settlements but in metropolitan cities like Calcutta, Bombay, Delhi, Madras etc, it is also used for intra-urban and suburban traffic.

Considering the size of rural population and the dispersed villages, the network of roads and other transportation media for linking the villages to the service

The urban settlements are characterised by highly heterogeneous modes of transport, viz, electric trains, buses, three-wheeler autorickshaw, house drawn

and marketing centres is inadequate. In majority of cases the type of roads connecting the villages with the nearest centre for transport, communication, education or health centres are foot paths and unsurfaced roads

carriage bicycles, cycle rickshaws and bullock-carts. In many exiles the cycle rickshaw is the major mode of public transportation

7. Other characteristics affecting environment

(a) Fragmented land holdings, inadequate administrative mechanism and fiscal institutions etc

(b) Chronic Unemployment, under-employment and seasonal employment forcing migrants to urban areas.

(c) Lack of afforestation, flood control measures etc, resulting in soil erosion and subsequent productivity loss

(a) Unorganised spot developments and extensive derelict land

(b) Urban blight dilapidated buildings in older parts of the city

(c) Obsolescence of building byelaws, planning regulations, norms and standards

(d) Disappearing landscape features and urban development spreading over extensive areas because of low density patterns.

*Source National Buildings Organization, Ministry of Works, Housing & Urban Development, Government of India 1975.

    (b) linear villages,

    (c) irregularly clustered villages and

    (d) scattered homesteads

Nucleated and clustered villages are the most common types
Linear villages are usually arranged on both sides of a street
and are common in South India Scattered homesteads are
found in Kerala and parts of Assam and West Bengal *

On the rural front the situation is just the reverse of urban
settlements As is evident from the following table 3 7 it is
the small size villages which predominate There was a reduc
tion of more than 10 per cent in the total number of small
villages in the last census decade Larger villages have increased
in number and size Already more than 12 per cent of the rural
population are living in areas of more than 5000 population
which is one of the qualifications for a place to be classified as
urban (assuming it is a nucleated single settlement) About
half the rural population lives in villages of size 1000-5000 The
growth of population is also highest in medium sized villages
This shows that a kind of agglomeration is taking place in a
small way in the rural areas as well It also means that new
rural settlements are rarely formed and the existing ones are
growing into larger ones However, one cannot infer that the
small villages will disappear in the forseeable future as the rate
of decline in their number is quite slow

On the other hand very small settlements are quite substan
tial in number at present and are capable of having planning
problems About a quarter of all villages in India have a

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*The Census considers the revenue village as a rural settlement and
therefore may consist of a nucleated village, or a cluster of several
hamlets or in some cases as in Kerala a fairly large area (sometimes as
much as 5 sq km) and a large population (sometimes more than
50 000) The analysis of census data as done below has to be under
stood in this light and should not be misguided However the majority
of settlements in most parts of India could be considered as nucleat
ed and co-terminus with a revenue village It is also not uncommon
to have satellite hamlets around a large village as products of popula
tion increases and socio-economic tensions Very large villages are
mostly not nucleated single villages In fact Kerala has been
taken completely out of this analysis as a distinction between
town and villages can rarely be made there either in physical appear
ance or in socio-economic characteristics

population numbering less than 200 The number of small villages are proportionately larger in Madhya Pradesh, Bihar, Himachal Pradesh Uttar Pradesh and West Bengal In Madhya Pradesh and Andhra Pradesh the number of villages with less than 200 population is very high Partly due to the terrain and the poverty of resources in these two states a sizeable population (38 per cent in M P and 68.8 per cent in A P) live in these tiny villages There have been some suggestions in the past for the planned evacuation of such villages and the shifting of population to bigger villages But, how far these are practical and wise from the socio-economic and ecological point of view is yet to be ascertained

Fig 4
Generalised Zones of Rural Settlements

LEGEND

Nucleated

Linear

Dispersed

BOUNDARY

International

State

ADAPTED FROM INDIA Country Report Presented at Nagoya 78
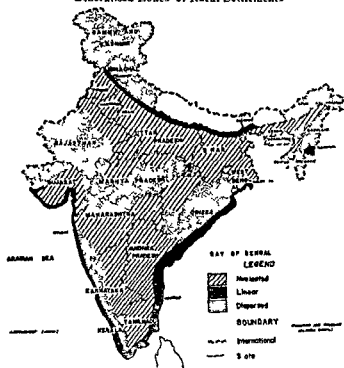
Table 27 Growth and distribution pattern of village settlements during 1961 71

Size of settlement	Census year 1961		Census year 1971		Per cent decadal growth	
	Number	Population (in million)	Number	Population (in million)	Villages	Population
1	2	3	4	5	6	7
Less than 500	3 49 558 (61.9)	75.24 (20.9)	3 01 406 (52.3)	71.86 (16.4)	−13.8	−4.5
500—1 000	1 19 197 (21.1)	83.84 (23.3)	1 50 072 (26.1)	94.33 (21.5)	+25.9	+12.5
1 000—5 000	91 784 (16.3)	165.90 (46.2)	1 17 908 (20.5)	217.61 (49.6)	+28.4	+31.2
5 000—10 000	3 396 (0.6)	22.18 (6.2)	4 994 (0.9)	32.72 (7.4)	+46.5	+47.5
10 000 & over	783 (0.1)	12.23 (3.4)	1 358 (0.2)	22.33 (51)	+73.7	+82.3
All	5 64 718 (100.0)	359.4 (100.0)	5 75 721 (100.0)	438.86 (100.0)	+1.9	+22.1

Source Census of India 1961 and 1971

Table 2.8 : State-wise distribution of villages according to population (1971)

State/Union Territory	10000 & over	5000 to 9,999	2000 to 4699	1000 to 1999	500 to 999	Less than 500	Total
1	2	3	4	5	6	7	8
INDIA	1358	4975	35992	81909	132873	318611	*575721
States							
Andhra Pradesh	80	724	4833	6411	5438	9735	27221
Assam**	1	29	788	3061	5986	12359	22224
Bihar	25	676	4333	9310	15228	37933	67566
Gujarat	17	248	1965	4398	5241	6406	18275
Haryana	8	148	975	1673	1909	2018	6731
Himachal Pradesh	—	2	50	260	861	15743	16916
Jammu & Kashmir	—	9	226	764	1556	3948	6503
Karnataka	9	252	2014	4556	7082	12913	26826
Kerala	808	316	122	16	2	4	1268
Madhya Pradesh	6	87	1292	5952	16516	47030	70883
Maharashtra	75	492	3102	7439	10529	14141	35778
Manipur***	—	8	79	172	239	4085	4583
Meghalaya	—	1	17	114	169	659	960
Nagaland	—	—	7	54	237	663	961
Orissa	2	22	830	3546	8821	33771	46992
Punjab	2	79	940	2392	3577	5198	12188
Rajasthan	10	165	1524	4008	7817	19781	33305
Tamil Nadu	140	752	3902	4547	3425	2969	15735
Tripura	—	3	55	222	473	3974	4727
Uttar Pradesh	58	515	5400	16031	28295	62212	112561
West Bengal	52	412	3342	6622	9085	18561	38074
Union Territories							
Andaman & Nicobar Islands	—	—	1	19	32	338	390
Arunachal Pradesh	—	—	11	37	107	2818	2973
Chandigarh	—	1	—	7	10	8	26

1	2	3	4	5	6	7	8
Dadra &							
Nagar Haveli		5	26	18	21		72
Delhi	2	6	60	79	53	43	243
Goa Daman &							
Diu	2	23	77	85	82	140	409
Lakshadweep		2	6	1		1	10
Pondicherry		3	26	57	85	162	333

Source India 1975

Note There is a slight discrepancy between this table and Table 2 7 The total number of villages in the lowest two classes (less than 500 and 500 to 1000) do not agree with table 2.7 individually but taken together they are very small namely of 6 villages This may be due to a difference in classification

   * Includes three villages of Manipur for which details are not available.

   ** Includes Mizo district, now constituted as Union Territory of Mizoram.

   *** Separate population of three villages not available.

On a careful examination, table 2 7 of this section and tables 2 2 and 2 3 of the previous section tend to reinforce the generally held view that in matters of human settlements India is dichotomous in development There are a few towns each of which is engulfed in a vast hinterland of too many tiny villages On an average, there are about 135 villages for each town in the country What makes the situation worse is the weak links between towns and villages There are not only few small towns but also few large villages (barring the scattered homestead patterns and cluster or hamlets of riverine villages) There are thus a few large towns and too many small villages While the former groan under their own weight the latter have too meagre resources to evolve viable economies

RURAL POVERTY AND THE LIVING ENVIRONMENT

As shown earlier rural areas are habitated by poorer people in India Estimates show that more than 50 per cent of the ruralites live below the poverty line *

According to the Planning Commission, the bottom 30 per cent of the rural population consumed on an average goods worth only Rs. 22 90 per month (in 1973 74) The top 30

per cent's average consumption was Rs 84 35 The consumption level in urban areas was slightly better at the top 30 per cent But at the bottom 30 per cent it was similar to that of rural areas

This disparity in income and consumption is indeed more in urban areas, compared to rural areas The contrast is less here Nonetheless the poverty in rural areas is as grave as in the urban areas In rural India the disparity is mainly due to the disparity in land holdings and livestock Severe unemployment of agricultural labour is also another factor As per one estimate (Raj Krishna 1971) 13 2 per cent of the labour force (2,62,00,000 people) in the rural areas was unemployed or underemployed in which 4 5 per cent was severely underemployed and 4 2 per cent was unemployed These estimates are based on a sample survey, and it is argued by some economists that the actual unemployment in the rural areas is much higher Another estimate (by CMIE) stated that unemployed were 5 7 per cent and unemployed and underemployed together constituted 17 7 per cent in 1971 [6]

Poverty is reflected in the environmental condition of the villages also About 90 per cent of the houses in rural India are made of mud, wood, thatches and various types of local materials About half of the total number of villages have no pucca houses at all, which are durable Only 31 per cent of villages have more than 5 pucca buildings Overcrowding is, not a phenomenon in urban areas alone, it has its rural counterpart About 40 per cent of the rural population resides in one-room houses, 29 per cent in two room houses and 14 per cent in three-room houses Basic amenities such as water supply, bathrooms and latrines are scarce, if not absent Only 4 3 per cent of the population living in less than 2 per cent of the villages have access to piped water Over 70 per cent of the households depend on wells ponds and lakes for this essential commodity, 94 per cent have no bathrooms and 97 per cent have no latrines The sources of water, which are considered to be included available to the households are 68 08 per cent from wells, 6 45 per cent from tanks and ponds, 9 35 per cent from tube wells, and 24 1 per cent from other sources (Only 40 per cent of the rural population has electricity (See also table 2 6) Commercial energy is very rare and more than 90

per cent of ruralites live using muscle power, cowdung cakes
and firewood These sources of energy are also becoming
costlier

What is reflected in the housing and other conditions is
only a part of the rural poverty There are also more challeng-
ing issues such as severe malnutrition, high illiteracy, drain of
the educated and pioneering ones to urban areas and wholly
unsatisfactory health conditions Some of these are products
of the lack of vitality of the rural economy in the present day
Indian context and the perpetuation of a highly stratified
socio-economic structure based on caste and ownership of land
The rural economy at present is a curious mixture of feudalism
and capitalism. High dependence on agriculture and lack of
any diversification in the rural areas is also another important
factor There are also some problems associated with the
scattered nature of the rural settlement pattern and the
inability of many small settlements to create enough demands
to provide and support even the basic facilities like water,
health facilities and schools It is also true that the design of
these facilities at present is highly incongruous to rural
culture and economy

Rural settlements in India nonetheless, have played a very
important role in shaping the country s culture and economy
As the vast majority of Indians live there, rural settlements
cannot be written off as marginal areas and peripheral to
modern or future India It is true that past policies originating
from the urban elite have done much damage to rural
economy and rural life They have also tried to write off
India s rural areas as a curse and a passing phenomenon which
must be helped to vanish The national report presented at
Vancouver even concocted a lie to belittle the role of villages
and glorify the urban

> Rural India was largely unaffected by political change and
> contributed marginally its share of goods and services to the
> national economy The self-contained nature of the Indian
> village tended to make them inward looking to the extent
> that at times they got isolated from the monetary system
> Even today, agriculture and its ancillary activities continue
> to be the main occupation of the rural population It was

during the freedom struggle that Mahatma Gandhi brought to the attention of the nation the plight of the rural masses and the socially depressed people, and tried to break the barrier between rural and urban communities [6] (italics ours)

How can rural India's contribution which is more than 40 per cent of the national income through its own share in agriculture (apart from contribution to other sectors) be considered marginal? In the past, the villages' role was greater and only with the advent of modern industry, did the role of villages start diminishing. It is incorrect to say that Indian villages are inward looking, when they make the urban areas swell and also survive to a large extent. Many political movements in India, gained their momentum in rural areas and many others did not succeed since they didn't have rural roots. What Gandhi attempted was not to salvage villages and open them to urban areas, but to show the ignorant urban man of India, the culture to which he belonged, and which survives only in the villages. This is not to mean that all that is rural is good, (though it may be true that all that is rural is truly Indian). But to condemn all that is rural as bad and unprogressive is a highly prejudiced view, inculcated among the educated elite in India by the Western educational system and values. And it is a fact that India's visualisable future is still predominantly rural

TRIBAL SETTLEMENTS

Tribals in India are found mostly in forest areas or nearby haunts, but it is not uncommon to find them in cities as well. What makes a group tribal is their primitive occupations, such as hunting, food gathering etc. There are three types of tribal groups in India—sedentary, semi-sedentary and nomadic.

Sedentary groups are found in many parts of India, especially in the forests. They either do shifting agriculture, or collect food or hunt. Most of these settlements would be near water bodies and rivers. They are permanent settlers in their villages which are normally small and built mostly of forest materials. Their number in most areas is not very large and

they used to be pretty isolated They move to cities
nowadays, to sell their products But there are areas like the Bastar region
in Madhya Pradesh, where tribals predominate large areas such
as a district or more Extensive tribal areas are found in the
states of Madhya Pradesh Orissa, Maharashtra, Gujarat,
Andhra Pradesh, Bihar and Rajasthan

Semi-sedentary groups also depend on shifting agriculture
and forests, fruit roots and game Their houses are built for
temporary residence for an year or two Even when they are
settled at a place, the village is occupied only for a few months,
then the whole community moves out with cattle and sheep in
search of pastures new

The third type in the tribal group is the nomad who has no
permanent settlement This group is very small in India and not
confined only to forests, nor even to rural areas

Many of these tribal settlements are now facing different
types of problems, which they were never used to First,
many irrigation projects inundate their settlements or close their
movement routes to the outside Second, the forest protection
by government put many of them again to difficulty Hunting
and the many tribal occupations they are used to, cannot
be practiced freely now in many places A third type of threat
for them is the unimaginative programmes made for tribal
development itself The Government of India has a special
programme for tribal development which, it is alleged does
more harm to them than good

The Future of Human Settlements in India

We noticed in the last chapter that the prospects of popula-
tion growth, at least in absolute figures, if not in growth rates,
will have serious repercussions on the land, employment and
even food The following table 2 9 gives the estimates of popula-
tion growth

These projections are in fact based on optimistic assump-
tions If the birth rate is not reduced as much as is required,
and if growth rates remain almost the same the story might be
different The Malthusian devil may gobble itself up There are
also doubts whether the Indian economy would be able to take
up the weight of this population growth All these questions

apart, there is also a big question, where will the population be living, in what kind of settlements and under what conditions ?

Table 2 9 : Estimates of population growth, 1971-2001

Year	Population		Birth and death rates	
	Millions	Rate of growth	Birth rate	Death rate
1971	548	24 8	39 4	16.9
1981	668	21 9	32.9	13.9
1991	801	19 9	28 1	10.6
2001	945	18 0	25 7	9 7

Source   Census of India 1961 and Population of India 1974—World Population Year, CICRED Series, Registrar General of India

Some projections say that by A D 2000 there will be 30 per cent of the population living in towns Then what would be the nature, number and size of these towns ? Will these populations be accommodated in the larger cities or smaller cities ? Will the migration to urban areas continue ? With the increase in population, do we have any prospect of improving the quality of life in cities and villages ?

It is pointless to ponder over these questions if the trends are secular and will go on thus There are some chances, however, of changing the situation by a collective will There is a possibility of changing the course of events if we are determined to make changes in society We need more serious thought and action in this regard than mere projections We need normative thinking and a vision of our future What kind of society can we create and what would be the pattern of human settlements in that society ? And what should be our strategy to achieve this end ?

There are conflicting views at present Some advocate greater emphasis on rural areas They argue that a majority of Indians live there and will continue to do so Our primary stress therefore, should be to improve their lot and contain them there This will retard migration and urbanisation of the kind we had, the argument goes This group supports small scale technology, rural industrialisation and 'small is beautiful' There is yet another group who sees the future mainly in terms of heavy industrialisation and urbanisation Cities and city life are

what ultimately take a country to modernisation, they argue
But most of them also concede that the pattern of urbanisation
should not be haphazard as in the past, it must be directed
towards desirable channels Very large cities should not be
allowed to grow, but smaller and intermediate ones should
This group wants to assimilate the gains of high technology
exemplified by the West A third group mediates between the
two and argues for an emphasis on small and intermediate
towns, not as a channel of urbanisation, but as centres of
growth and development in the rural areas, thus providing the
basis for an urban future society where the difference between
the quality of life, between the rural and urban be reduced
This group wants to get the positive gains of both the above
approaches

While the first two approaches have shades of extremism
and do not give full weight to history and the context, the third
is a distant dream, too costly to experiment All these argu-
ments however miss two main factors One, the fundamental
stratified situation in society, and second, that a settlement
pattern cannot be created by will, but is a product of socio-
economic evolution A desirable approach should start from a
realistic analysis of past and present and action should be based
on the clear understanding of the future we want to create In
this approach the rurban vision could be a direction to guide
actions of the present

REFERENCES

1 Both these estimates use the same absolute figures of unemployment,
   underemployment etc., but the estimates for the labour force are
   different
   Basic Statistics Relating to the Indian Economy, op cit

2. R P Misra (ed) *Million Cities in India*, Vikas Publishing House
   New Delhi 1978

3 In fact, as per the Raj Committee Report (on Taxation of Agri
   cultural Wealth and Laences) the top 10 per cent of the households
   included even those with Rs 400 of income per month (urban area
   inclusive) This top 10 per cent accounted for 25 per cent of the total
   private consumption In 1976 the cut off line of top 10 per cent is
   estimated around Rs 600 per month.

4. *Basic Statistics Relating to the Indian Economy, Vol 1, All India,* op. cit. In both these estimates the actual figures of unemployment etc., were the same but the labour force estimates were different.

5 NBO estimates : The WHO reports, differently :
"The percentage of rural population with reasonable access to safe water was 6 per cent in 1970 and 18 per cent in 1975 In drought areas people had to walk 5 miles and more There were also water quality problem areas endemic for guinea worm infestation, high fluorides and nitrates Rural sanitation was all but neglected, the coverage rising from 1 per cent in 1970 to 2 per cent in 1975 " Cited in *Yojana* 16 May 1978

6 *India,* Country Report presented at Vancouver.

3

The Quality of Life in Urban Settlements

THE PROFILE given by statistics at the macrolevel are too inadequate and simplistic to provide a complete picture of the urban environments in India. In this chapter, we present a few urban case studies. Shelter and residential environment define the immediate habitat conditions and we would therefore be focussing on this aspect of four selected cities, one large million city in the south, namely Madras, another million city in the west, Ahmedabad, and a small town in U.P. (north), Bela Pratapgarh. We would also discuss the cultural practices which create the habitat autonomously within the context of official rules. Both these—cultural practices and official standards—are based on differing perceptions of the environment and needs, and have been based on different value systems.

The value system of the vast majority in the city is tempered by their socio economic conditions which are structurally different from those of the decision makers who regulate the urban form. The majority acts from necessity, on a survival strategy, and its ideas about the shape of its habitat are framed by limited means, extreme aspects of the climate, an ' out of doors" life style and the absence of a well developed supporting technology.

The decision makers on the other hand decide on the basis of "taste", learned values and utopian ideals. The reality of the present is an abstraction to them and they live in an imaginary world of the future in which comfort, neatness fresh air and sunlight, trees and gardens, complete sanitation, interesting shapes and forms are all a part. The city they hope for is not different from British, American or Russian new towns where

the climate, the technology, the social pattern and the consumption levels are very different Therefore, the planned form of the city is incompatible with the needs of the users

The majority of the population effectuate city form only in shaping their own houses Therefore, it is in regard to shelter that conflicts often arise Public bodies cannot build houses for less than ten thousand rupees meeting their own standards and the majority of households cannot afford such an expensive house What they can afford is against the law and substandard They are too dense, have inadequate sanitation, poor lighting and ventilation, illegal margins and set backs and often not even built on their own land Sometimes the houses are built in the middle of what the development plan has set aside for a public road or park

Our case studies will try to present these predominantly private reactions to a predominantly 'public concern', viz the environment of shelter However, these case studies are not uniform in their presentation In Ahmedabad we stress the predominant elements of the urban form which is privately produced in Madras we look into two old neighbourhoods in particular and at Pratapgarh we look at the city through a bird's eye

AHMEDABAD—A VARIETY OF URBAN FORMS *

The Indian city—small or big—contains a variety of urban forms bungalows, slums, tenements, chawls, cheris etc Some are products of public reaction some products of private action We chose Ahmedabad to show this variety to represent the prominent patterns of an Indian city What follows in sequel is a discussion of Ahmedabad but similar forms could be found with little variation elsewhere

Six types of urban forms have generally been observed in the city of Ahmedabad They are pols, city villages, chawls, bungalows, hutments and flats

Pols

Pols are the most uniquely Ahmedabadi form of settlement. They are found in Saurashtrian cities and in Rajasthani cities as well but in Ahmedabad their form is rigidly adhered to by most of the walled city. It should be noted by the reader that Ahmedabad was founded by Muslims, though the vast majority of citizens had always been Hindu. In the early years this Hindu population consisted of the merchants, crafts-men, learned men and financiers who supported the court which acted as a controlling agent. Even up to the nineteenth century during the Maratha rule, the majority of city dwellers were living in a hostile environment, ruled by outsiders. This need for protection was complicated by the conservative nature of Gujarati culture and its dependence on caste to structure society and define functional roles. These two facts became formative elements in the city's growth. To this must be added the fact that Ahmedabad has always been a centre of commerce, textiles and finance. The people always had objects to protect and save. The *pol* then is the community of a caste group in this hostile environment. Each *pol* is an externally bounded community with a single gate, a gate keeper's house, at least one *pol* temple, wells and its own system of streets and courts. The *pols* are connected through secret doors between houses which back on each other. The *pol* was originally the place of a particular caste or community. The richer members of that community had larger houses or *havelis* located on the main courts which are called *chowks*. The poorer families had the narrower plots and the plots on small lanes or *gullis*. The typical house is composed of a row of rooms fronted by a platform called *otta*. After two rooms would come the house court or *chowk* and then one or two more rooms at the back. Most houses reached two, three or even more storeys high. A richer family might have a two- or three-bay wide house instead of the one row of rooms. As the house goes up it projects further into the streets which are narrow and little balconies overhang the street below.

The *pols* have their own worlds of their main streets where the shops and major government buildings are found. Mosques which represented the religion of the ruling class, were also on main roads in the public places. Muslim houses

also predominantly faced the open roads. Thus the visible city was the ruling Muslim city while the vast majority who were Hindu lived inside their pols hidden away from the public life of the city

The pol is ruled by its elders, who are elected into a committee of five to eight members. The group is called a panch and it has a budget collected from each house based on the number of kitchens and whether a man was a landowner or a tenant. Those having a business of their own are charged extra. The primary functions of the panch include keeping of the gate, maintaining the temple, arranging of the festival programme, performing certain rituals, regulating the entrance of new families to the pol and in other times judging conformity to caste structures. The pol, though is undergoing many changes. The bigger houses are being sub-divided into one room tenements or flats and are rented. Some older families are moving to the suburbs where a few bungalows are being constructed. Even though the pattern is changing the pol remains a predominant type of settlement form in the city with approximately 25% of the population living in them.

City Villages

While the walled city of Ahmedabad houses almost one-third of the city it only stretches about a mile and a quarter long to one and a half miles wide along the bed of the Sabarmati river. From earliest times there have been villages immediately surrounding the walled city. Across the river on the western bank, a number of villages clustered together in order to be nearer the river. As the city has grown it has included these villages which now form a basic type of settlement in the city. In some cases they have become commercial nodes as their markets were the only places for shopping as the city spread outside the walls at the turn of the century. Others have developed into service centers with tailors craftsmen and small shops serving the nearby bungalows. All of them have sold off their agricultural lands to housing colonies or institutions and trusts. A large portion of the population of these villages are renters people looking for a cheap room near their place of work in the city. New rooms are added to the old houses as a good income

can be made by the villager who owns a small piece of land In
the village the settlement is still sub-divided into caste groups
Patels, Harijans, Shahs and brahmins, each group has its own
neighbourhood with well, temple and open space Most of the
villagers have changed their occupations to non agricultural
activities, but many such as Rabaris (milk vendors) have increa
sed their profits many fold While the panchayat is no longer the
highest level of government, village affairs are still looked after
by a *panchayat* of village elders Caste leaders regulate the
social life of community members and often whole villages
pledge their support to a political party which promises to make
improvements if it is elected About 3% of the city of Ahmeda-
bad live in city villages

Chawls

As noted above, the economic base of Ahmedabad was
always in two areas commerce and textiles Trade and finance
were carried out by the Bania community which has dominated
the city Textiles were first manufactured as handlooms in
cottage industries The weavers were originally from the
Muslim community and some lower caste Hindus Commerce
and textiles have always played a role in the survival of the city
and it is no surprise that the city should have been called at the
turn of this century the ' MANCHESTER OF INDIA ' having
almost one hundred textile mills by 1900 Enjoying the peace
that came with the British era in Ahmedabad following the
chaotic period of the Maratha rule the Bania community
invested heavily in automated textiles and attracted thousands
of workers to the city to work in the new industries To house
these workers industrialists built *chawls* These *chawls* were
ground plus first floor structures with rooms lined up along an
access balcony on the first floor There were no internal toilets
or water taps, and the construction was cheap and straightfor
ward The construction and rental of *chawls* was a profitable
investment until the rent control acts just before the Second
World War The new construction of *chawls* came to a complete
standstill with the introduction of the 1954 Town Development
Scheme Given these setbacks the *chawl* is still a predominant
form of shelter in the city with about 21% of the population

living in them. The *chawl* was once the home of the migrant to
the city, but it is now the home of the intrenched industrial
labourer Most *chawl* dwellers migrated to the city at least one
generation ago and many have had associations with the city
which date back to the turn of the century It should be noted
that Ahmedabad's textile workers form a very stable segment
of the population and the labourers have been highly organized
since the beginning of this century If a *chawl* room falls vacant
its right will be sold to the family of another *chawl* dweller who
has a married son or brother in need of a house In this manner
it is not unusual to find a family living between two or three
rooms spread in an area about five minutes walking distance
apart *Chawl* dwellers being stable industrial workers, members
of unions and often semi skilled, earn well compared to recent
migrants to the city Some *chawls* are in the walled city near
the *pols*, but most are intermixed with the industries which
surround the walled city on the eastern, northern and southern
periphery The *chawls* are high density communities, but have
more open space around them than do the *pols* They rarely
exceed two storeys

Bungalows

With direct British rule in Ahmedabad came security in the
surrounding countryside and with the burgeoning industries
came a new wealth The British brought a lifestyle of bunga-
lows and gardens, first seen in the cantonment and soon copied
in grand style by the Parsis, and then followed by the Mahajans
of the mercantile community At first they went north of the
city towards the cantonment and then the Ellis Bridge opened
the western banks of the Sabarmati for development At first
this fashion was slow to take hold The Ahmedabadi was never
keen to display his wealth But with the availability of a 60%
loan from the Societies Act and the appearance of a managerial
class, joined by a small but growing group of professionals, the
first bungalow 'societies' emerged in the 1920's These com-
munities were of modest, but detached bungalows with a com-
munity plot for festivals and get togethers The phenomenon
spread to the south in Maninagar and the west in what is
now called the Ellis Bridge area There are more "societies" in

Gujarat than in any other state and most of them are in Ahmedabad More than any other house form this has become associated with the city's indigenous middle class

Hutments

With the ban on the construction of *chawls* and the decline of their importance as investments due to the Rent Control Act, the growth of low income, high density housing came to an end in Ahmedabad An alternative to the *chawl* had always been the city villages noted earlier or still better one could just build a hut in or adjacent to one of these villages The earliest such hutments were on the river bed at Shapur and we know that the people who now live at Gulbhai Tekra were first at the river bed near the construction site of Ellis Bridge where they had come to work from Rajasthan before the turn of the century With the rapid industrialization of the city and the population growth of the 50 s and 60 s the hutment as a settlement type has taken its place as a prominent form of habitat It is now estimated that about 26% of the population of the city live in these settlements, though there is no exact figure Until very recently these communities were not recognised by the government and hence did not appear in the Census, especially since they were squatting on public lands In an ad hoc manner they have been recognised by the city as the Corporation has built toilets and more recently improved some of them under the Slum Improvement Scheme The hutments are not all clustered together in one part of the city, but are spread like dots all over the city map outside the walled city The poorest of the city's population live in these settlements, and the vast majority of hutments dwellers are new migrants It can be said without doubt that the hutments are the fastest growing type of settlement form in the city

Flats and Tenements

Flats and tenements are a post Independence phenomenon of Ahmedabad Flats are, on the whole, two bedroom units with living cum dining room and one or two toilets. On the whole, they are ground plus two floor walk ups though there are

notable variations and there is a new pattern of elevator flats going up to ten storeys, especially along the river front In the sixties a pattern of parking on the ground level with three levels above evolved as the new sites became farther and farther from the city requiring a scooter or a car Most of these were built under the Societies Act of India Also built under this Act were tenements These tenements are not to be confused with tenements of the west which are more like *chawls* Tenements in Ahmedabad designates a semidetached house in which two dwelling units are joined by a common wall They are then small bungalows every two of which share a wall This is a very popular form of house which almost always has a ground floor only with provision for vertical expansion Very often the vertical growth is rented out for extra income or is built by a son several years after his marriage It is estimated that about 10% of the population live in flats of one type or the other and 8% of the population in tenements These are important but not rapidly growing forms of habitat as they are restricted to the middle classes

MADRAS VILLAGES AND OLD SETTLEMENTS*

Traditional residential neighbourhoods are seldom exclusively residential in Indian cities Most often the major commercial areas happen to be the most dense residential areas as well This case study is about two such areas in Madras city

An Over view of Madras City

The plain topography allowed full freedom to the economic and social forces to shape the development pattern of Madras city Transportation routes both rail and road from north, south and west converged at George Town These transportation routes later influenced the pattern of development a great deal Development was towards the north initially and later towards the west and recently the growth has been towards the south and south west

George Town is the CBD Wholesale and other business

* This study was conducted by B S Bhoothan Institute of Development Studies Mysore

houses are mainly concentrated there Transportation terminals like the Central railway station, local private and express bus terminals, truck terminals and the sea port are also located around George Town. All these boosted the importance of George Town as CBD Recently commercial developments are taking place along Mount Road as an offshoot of George Town. Mount Road is now developed as a prestigious shopping area for certain items like textiles and one by one many professional offices and banking institutions are getting located along the road Apart from George Town and Mount Road, there are a number of secondary commercial areas with vegetables, gram and meat markets, textiles, provisions and fancy shops, restaurants and service industries

Most of the major industries are located outside the city along the transportation routes except for a few in George Town, Mount Road and Chintadripet.

There is no clear separation of residential uses of land and they are found along with other uses in most of the older areas. Even in the industrial areas, there is high residential concentration. Only the new residential areas which are part of the Government s housing programmes are exceptions to this. There was always a lag in the supply of housing in relation to its demands and organised effort in housing is only a post independence phenomenon. While new residential lay-outs were developed on the south and south west, employments were concentrating in the north and north-west and the CBD This has resulted in heavy overcrowding on the northern part of the city and the CBD The overall density in 1961 was about 2,600 persons per sq km in the Madras Metropolitan area, whereas the CBD had a density of 35,000 persons per sq km as against 16,500 persons per sq km in the urban area as a whole

Squatter settlements have sprung up as a reaction to inadequate housing scattered all over the city They consist of huts built in haphazard manner without proper access, water supply and drainage They are usually single room tenements with mud walls and floor and roofed with coconut leaves and other discarded scrap These slum settlements are not very large They vary from 10 to 300 squatter families. At present, there are 1,200 such squatter settlements and 30 per cent of the city's

population live in them They have spared no area and are found mixed in all sorts of developments even next to the prestigious residential areas of the wealthy One typical feature of course of the city is that in the midst of higher income housing one can find middle and low income housing and hutment settlements too

More than one-third of the city's population is first generation migrants[1] of whom males are predominant Only 26 per cent of the total migrants are from other states and 2 per cent are Indian repatriates from Burma and Ceylon while the maximum percentage (69 per cent) is from within the State In the States' contribution the bulk of migration is from adjoining districts. Migrants to Madras are not illiterate rural alone A majority of them are literates. It has been found that 65 per cent of the migrants are literates and 42 per cent of the migrants are of urban origin Three-fourths of the migrants fall under the working age group of 15 30 years and 42 per cent are workers as against 40 per cent of the non migrant population By and large most male migrants who turn towards the city are workers moving in for employment.

The Madras Metropolitan Area makes a substantial contribution (12.5 per cent) to the total income of the State Yet Madras by and large is a city of low income population Though the total income and per capita income have increased there is a disparity in their distribution 71 98 per cent of the households in the city had their monthly incomes below Rs 250 in 1971 18 per cent had their incomes between Rs 250 and Rs 500 7 32 per cent between Rs 501 and Rs 1 000 and only 2.29 per cent had monthly incomes above Rs 1 000[2]

Even the higher income groups do not always represent the affluent section It has been observed that many higher income households are composed of large joint families with more working members and it is the earning of all the working members together that is reported as the income of the family A sample study in a few selected areas in the city concluded that the average size of the families is larger in middle and higher income groups compared to lower income groups

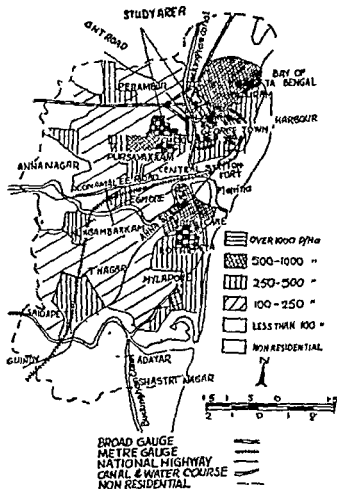The Madras Metropolitan Plan 1971 91 observes that community and utility services available are inadequate to meet

the needs of the metropolis Transportation in the city is
mainly by state owned buses catering to about 80 per cent of
the commuters and to a limited extent by suburban railway
service Both the services are overloaded About 60 per cent
of the intra-city transportation needs of the people are met by
these facilities, the rest is handled by bicycles and other
services There are only a few parks and playgrounds and
most of them inconveniently located The water supply system
designed more than six decades ago, has already been over
burdened and is reported to be inadequate Forty per cent of
the city is still unsewered and no underground drainage system
exists in the outlying areas Inadequate water supply has
been the main reason for not extending the sewage system

Two Neighbourhoods

We can now have a closer look at the two selected old areas
in the city, the two densest residential areas George Town
and Purasawalkam which are older settlements which developed into
commercial areas when the city grew in size George Town is
the CBD and located near the harbour All three national
highways which enter the city meet at George Town Purasa-
walkam is a secondary commercial area about 3 km west of
George Town located by the side of the Purasawalkam High
Road We have not selected the whole commercial areas in both
the cases as they are very large, but we chose two smaller areas
of about 1 5 to 2 sq km in each case Even within this we have
made a random sample of 238 and 200 families in George Town
and Purasawalkam respectively, accounting for roughly about 5
per cent of the households

George Town is oblong in shape and well demarcated by
railway lines to the west and north, the harbour to the east and
a major road and railway line to the south A number of
streets run north south parallel to the beach line which divides
the area into narrow blocks A few streets run across east west
also The streets are very narrow and were not originally laid
out for vehicular traffic Many of these do not allow two vehicles
to cross each other The buildings are old and mostly single or
two storeys high Towards the south where commercial deve-
lopments are intense, many original buildings have been replaced

Fig 5
Madras City Population Density

STUDY AREA

GNT ROAD

PERAMBUR

BAY OF BENGAL

ANNANAGAR

PURSAWAKKAM

TOWN

HARBOUR

CONRAN SMITH ROAD

CENTRAL

FORT

NASAMBAKKAM

AVADI

T NAGAR

MYLAPORE

SAIDAPET

GUINDY

ADYAR

SHASTRI NAGAR

	OVER 1000 P/Ha
	500–1000 "
	250–500 "
	100–250 "
	LESS THAN 100 "
	NON RESIDENTIAL

BROAD GAUGE
METRE GAUGE
NATIONAL HIGHWAY
CANAL & WATER COURSE
NON RESIDENTIAL

by structures three to four storeys high These buildings which
abut the narrow streets with their commercial functions and
abutting appurtenances like signboards and display boxes,

make the streets still narrower. A few new multi storey offices of banks, commercial firms and customs and Ports authorities are found nearer the harbour Towards the north, buildings are still older and roofed with tile Open space is non existent except the small quadrangles within some of the buildings. Vegetation is completely absent

George Town has a thoroughly mixed landuse, though it is the CBD The commercial developments are intense towards the south Apart from the retail and wholesale shops of all sorts, clearing and transportation agencies, stock brokers, pawn brokers, goldsmiths, stationers, professional and banking institutions etc , there are a number of daily markets of grain, produce and meat, as well as a few major industries like textile mills Hundreds of service industries also function in George Town and there are large godowns for them One peculiarity of the commercial development of George Town is that each one of the streets specialises in one of the commercial goods. For instance, certain streets specialise in bangles and fancy articles of glass, while certain others abound with transportation and clearing agencies and some others in hardware and still others in plastic goods There are a number of petty shops in the first beach line which trade in all varieties of goods, mainly smuggled ones A number of restaurants are also found in the area

Yet George Town is one of the dense residential areas in the city As one moves northwards along the streets, the commercial character changes more to the residential character Even in the busy commercial streets, there are many residences behind the shops Dwellings in George Town are by and large, old structures and single storeyed street houses, but a few bungalows and apartments can also be found there The resi dents are mostly those who have been there for a long time in the area or those who have work or family business there The few slum pockets are not extensive slums, but pockets of fifty to two hundred huts. Most of them have come up on open lands or on sidewalks of some of the broader streets. A number of homeless people also reside on the pavements of the streets They are nomads but they have located themselves at fixed points on certain streets and have been residing there for a long time Some of the pavement dwellers have lived there for

generations They have no roof above their heads; they have the bare essentials for cooking and some of them have cots and chairs They cook on the streets and sleep there During the rains they take refuge in public places like schools and temples

The various services required by the dwellers are available in George Town There are schools, hospitals, clinics, maternity centres and cinemas, all squeezed in between commercial developments A few temples, some of them are quite big and of considerable repute, and churches and mosques can also be found there Apart from the established old temples, a number of tiny places of worship on open platforms with a box to place the offerings have mushroomed on the sides of many of the streets

In this Central Business District, which is also a living environment for many, a rectangular area consisting of two Census districts was selected for intensive study. The study area is towards the north of George Town adjoining the railway line to the north, and Broadway, a commercial street to the west and Mannadi street to the south Broadway, Mannadi street and Thambuchetty street are the major commercial streets All other streets have commercial developments towards the Mannadi street and to the south Salai Vinayagar street which runs across the study area is another commercial street in this place

Similar to the other in George Town, the sample area is also predominated by tiled single storeyed street houses in rows with courtyards inside. Most of them are old and new constructions are rare A few two storey buildings and apartments are also to be found Two slums of 100 to 200 huts also exist, there are about 20 pavement dwellers

There are two daily markets of local significance and two temples, two schools, a hospital, a maternity clinic and a number of private clinics All these except the hospital serve the local community only

In Purasawalkam, the other study area, commercial developments are linear and confined mostly to the Purasawalkam High Road and Thana Road There is a market and a variety of shops. All are retail in nature and more or less local in significance The Thana Road is characterised by unauthorised

pavement vendors of vegetables, flowers and fancy goods who disperse by afternoon everyday.

The sample area is on the north side and adjoining the Purasawalkam High Road It is rectangular and consists of one full Census district and parts of two others Here again the layout is fairly of a checker board pattern with most of the access streets running north-south The area is less congested and there is a large open space almost in the middle of the study area This happens to be the graveyard attached to a local church This acts as a lung space for the area. There is more greenery especially towards the southside which is characterised by independent bungalows of upper income families with lots of garden space around Towards the north, the appearance is similar to that of George Town study area with tiled houses and narrow streets This area is settled by milkmen and potters who keep their cattle and heaps of clay on streets The milkmen milk their cows and buffaloes on the street itself and the potters also work there with their wheels. Clay idols, mostly to be exported to other areas in the country are the specialized products. Sometimes, the area is covered with thick smoke from kilns located on the pavements It is a calmer area with lesser congestion, but the structures are old and their conditions similar There are no pavement dwellers here nor is there any slum area.

As in any old settlement, most of the streets are narrow in both places. But vehicular traffic is almost absent except for cycles and bullock carts in many residential streets. Cycles are in plenty in George Town Stray animals wandering in the street are common Most of these animals are owned by people residing in the area There are a number of people who earn livelihood from livestock Some houses have their own cattle-sheds But there are also two large community cattlesheds in George Town The interior of the study area gives a rural look with haystacks on the verandah and cattle on the street Cowdung cakes, clothes and grain are kept there for drying The streets are also used as meeting places of elders and a place where children play cricket or fly kites Womenfolk are seen gathering in front of houses, combing their hair gossipping or buying vegetables, bangles and other household and fancy articles from the street vendors Younger children use the

interior streets for defecating also The sample areas are not well sewered and dirty water is seen stagnating in the open drains on the street sides The bullock carts of the city administration frequent the places once a day collecting garbage thrown on the street.

Both the study areas are predominated by migrants Of the 238 and 200 households studied in George Town and Purasawalkam respectively, 52 7 per cent and 42 per cent respectively are found to be first generation migrants Of these 47 7 and 38 5 per cent respectively are migrants of less than 10 years' standing About 9 per cent in each of the two areas, are descendants of migrants whose fathers or grandfathers migrated to the city A 37 7 and 49 per cent of the people of George Town and Purasawalkam respectively are not able to trace their origin or may be deemed as non migrants. Of the total migrants, rural migrants are more in George Town (about 70 per cent) while migrants of rural and urban origin are more or less equal in Purasawalkam

Hindus predominate in both places (about 90 and 70 per cent respectively) Among the rest there is a higher percentage of Christians We find a few Muslims in George Town A majority of the Christians are Anglo-Indians Brahmins and Scheduled Castes and Tribes are also found mixed with other castes in George Town They are of negligible percentage in Purasawalkam

There are more nuclear families in the samples of both the areas—50 per cent in George Town and 60 per cent in Purasawalkam The average sizes of the sample households are 6 4 and 5 8 respectively Literacy is 48 per cent in George Town and 58 per cent in Purasawalkam In George Town only 42 per cent of the female and in Purasawalkam only 50 per cent of the female population of the samples could read or write Almost all the boys in the student age groups are found to be attending school, but among girls there are quite a few drop-outs Only 27 per cent of the total population constitute the working force and earning members of the sample population Female participation is as low as 8 5 per cent in George Town and 11 1 per cent in Purasawalkam

The predominant occupations of the people in both places are the lower administrative jobs such as stenographers and

clerical workers We also find substantial percentages of workers, such as workers in industry, carpenters, goldsmiths, drivers etc , self employed persons like landlords, businessmen, shop owners, etc , and unskilled labourers like coolies earning daily wages There are a few petty traders like hawkers and street vendors Higher administrative personnel like executives are also found in the samples

Table 3 1   Occupation groups in study areas

	George town	Purasawalkam
Self employed	24.8%	17 1%
Administrative Higher	3 8%	4 8%
Administrative Lower	23 7%	36 4%
Skilled	13 8%	20.5%
Attenders/Servants, etc	4 5%	4 1%
Unskilled	20.2%	12.3%
Petty trade	4.2%	4.8%
Total	100 0	100 0

The sample households were grouped according to their monthly income groups as given below for initial analysis The percentage of families falling in each group is also given

Table 3 2   Income groups in study areas

		Percentage of total households	
		George town	Purasa-walkam
Economically weaker sections of the society	Below Rs 100	6 7	4.5
	Between 101 250	25 6	30 5
Low income	Between 250-500	33 6	27 0
Middle income	Between 501 750	13.9	16.5
	Between 751 1250	14 3	15 0
Higher income	1251 and above	5.9	6.5

The categories followed are as identified by the government for their housing programmes *

It was observed that the incomes of many of the households in middle and high income groups are contributed by more than one earning member Hence the occupations and household incomes did not relate much It is also found that the same kind of skill can earn different wages and salaries and a better salary depends more on the good fortune of the person in securing a better place of employment Ponnaswamy is a driver employed by a middle class family He earns Rs 183 00 per month, while Ghouse, who is also a driver with the same skill, earns a good amount of Rs 500 per month, because of the simple reason that he is employed by a private commercial organization The service conditions are also substantially different However, it could be stated that the lowest income group consists of families of unskilled labourers, traders, atten dants and servants and a few clerks. They are by and large, single-earning member families In a few cases, it is found that the women and children engage themselves in petty jobs to add to their meagre incomes The occupation groups falling under the middle income are those of unskilled labourers, persons at lower administrative levels, and petty traders Servants and attendants with more than one earning member in the household can also be found in these groups Higher income groups are either joint families with a number of earning members or families of executives, landlords or businessmen

Environmental Preferences and the Struggle to Satisfy Them

The life style and adaptation to the urban way of life and the emerging environmental and housing requirements are not exclusively governed by income The financial position to pay for a better condition, of course, influences the choice But the willingness to spend more on housing is patterned by other

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* The Government has changed the l m ts of the income brackets recently At present they are Economically Weaker Sections of the Society Below Rs 350 Low Income Rs 351-600 Middle Income Group Rs 601 1500 and High Income Group Above Rs 1500

found to be predominated by unskilled labourers and Scheduled
Castes and Tribes Similarly, families of very high income are
also found living in congested areas like George Town in old
structures similar to low income groups, though they can afford
to live in better housing areas This is influenced again by the
close neighbourhood ties and kinship relationships that have
developed over time

A study of the rental level of the sample households shows
that even in the same income brackets the rent paid by families
varies substantially The same observation holds good in the
distribution of households according to their expenditure on
housing (see table 3 4) All this points out that people's willing-
ness to pay more on housing depends not only on their income
status but on other social factors as well, including their
perception about the environment The same point is proved by
an analysis of the modern utilities in the houses also Even
among the very low income groups, there are certain households
who own some sort of furniture and other utilities Most of
these households belong to white collar workers There are
households in the middle income groups who do not own any of
these things (see Tables 3 3 and 3 4)

Typology of Shelter and Environments

The shelter in Madras as observed in the case study areas
could be classified into five major groups They are the huts,
the row houses, the street houses, the multistoreyed apartments
and flats and independent bungalows The huts are the simplest
forms of dwellings and most impermanent in nature They are
found usually in slums or on the sides of streets Huts are made
of thatch (coconut leaves), grass, bamboo, mud, metal sheets
canvas and other discarded materials The construction is mostly
by the occupant himself with the help of friends and relatives It
is quick and such dwellings mushroom overnight as most of them
are unauthorised constructions on open lands and streets Tile
roofs could also be found as a variety of huts, but the flimsy
construction and arrangement within could still classify them in
the same group Huts are usually single room tenements and
vary from 10 to 30 square metres There is generally no separate
kitchen Bathrooms and toilets are conspicuous by their

Table 4.3 : Rental level and income level

Rental level (Rent per month)	George Town — Monthly income level of the household										Puraswalkam — Monthly income level of the household									
	Up to Rs 100	101-150	151-250	251-500	501-750	751-1250	1251-1500	1501-2000	Above 2000	Total	Up to Rs 100	101-150	151-250	251-500	501-750	751-1250	1251-1500	1501-2000	Above 2000	Total
1. Up to Rs 9	1	3	1	1	—	—	—	—	—	6	4	5	1	—	—	—	—	—	—	11
2. 10-19	8	5	2	1	—	—	—	—	—	16	6	6	2	1	—	—	—	—	—	15
3. 20-29	2	6	11	3	1	—	—	—	—	23	—	7	12	4	—	—	—	—	—	23
4. 30-49	—	1	15	12	2	—	—	—	—	30	—	2	17	5	1	—	—	—	—	25
5. 50-74	1	—	10	13	4	—	—	—	—	28	—	2	5	6	2	1	—	—	—	16
6. 75-99	1	—	5	9	1	3	—	—	—	19	1	—	—	10	12	6	1	—	1	34
7. 100-199	—	—	1	7	20	3	1	3	—	24	—	—	—	—	1	5	1	2	1	—
8. 200 and above	—	—	1	11	—	—	1	—	2	—	—	—	—	1	—	1	—	1	1	—
9. Rent free	1	2	—	2	1	—	—	—	1	3	—	1	—	1	—	1	—	—	—	3
10. Owned	2	4	13	20	3	4	—	—	4	63	2	1	—	19	14	6	—	3	—	59
Total	16	21	40	80	33	34	6	3	5	238	9	24	37	54	33	30	6	5	2	200

Table 3 4 : Expenditure pattern (housing) and income level

Expenditure—Pattern (Housing) (Percentage to total monthly expenditure)	George Town — Monthly income level of the household										Purasawalkam — Monthly income level of the household									
	Up to Rs. 100	101 150	151 250	251 500	501 750	751 1250	1251 1500	1501 2000	Above 2000	Total	Up to Rs. 100	101 150	151 250	251 500	501 750	751 1250	1251 1500	1501 2000	Above 2000	Total
1 No expenditure	2	3	3	—	—	1	1	—	1	11	—	3	1	1	1	—	—	—	—	4
2 Below 2 5%	5	3	3	3	1	—	—	1	—	11	3	1	1	—	2	1	1	—	—	5
3 2549	4	7	14	24	2	2	—	—	—	29	1	2	1	5	12	2	—	1	1	11
4 5099	6	8	15	36	20	3	2	1	—	69	2	4	8	12	7	4	2	1	1	39
5 100-249	—	—	4	15	10	25	2	1	3	105	—	9	26	33	34	20	2	2	—	117
6 25032	1	2	2	2	1	1	—	—	1	16	1	2	—	3	3	3	1	—	1	19
7 333 499	1	—	—	—	—	—	2	—	—	5	—	—	—	2	—	1	—	1	—	5
Total	16	21	40	80	34	33	6	3	5	238	9	24	37	34	37	30	6	5	2	200

absence Cooking is done in a corner and in some cases, a low, wall may divide the room from the kitchen Windows are also usually missing Roofs are very low normally and one has to bend low before entering It would be very difficult for a man to stand erect inside most of the huts Male members sleep outside the huts more so, in summer Huts are also found in a row of 4 or 5 units with common walls between the units Most of the huts are accessible only through narrow alleys as they are laid out in a haphazard manner in slum areas Only households with monthly incomes below Rs 500 are found living in huts in the study areas

Unlike huts, row houses are authorised constructions, mostly of a durable nature and made by private builders for rentals They are also single room tenements arranged in rows with common walls between tenements on either side of a narrow alley They are usually of brick and the back walls form the property boundary thus virtually closing all the three sides of the tenement, except the front The only opening will lead to the alley A small enclosed verandah is usually found in front The size of the row house tenements also varies from 10 to 40 square metres and these generally do not have a separate kitchen Neither bathrooms nor toilets are found attached to any of the row houses they are provided in common, to be shared by 5 to 10 families residing in the same plot

The most common form of dwellings in the study areas are street houses These are old structures on either side of the streets abutting each other and also the streets with steps projecting into them These houses are either tiled or roofed with Madras terrace Many street houses have a verandah in front with raised platforms to receive guests and visitors From the verandah a passage leads to the courtyard around which rooms are arranged Courtyards vary in size In some cases another passage from this courtyard leads to the backyard Street houses of multiple courtyards could also be found Courtyards are used for washing and other purposes Taps or wells are found here Toilets and bathrooms are constructed in the backyard and in some cases in the courtyard itself Domestic gatherings take place in a lounge around the courtyards When these houses were single family dwellings rooms around the

courtyard had openings only on to the courtyard. These street houses vary in size and style of construction

They were originally constructed for single families but have now been converted to multiple dwelling units In most cases each room is sublet for a household as we have previously described in the case of Ponnaswamy's residence The households eat, receive visitors, sleep and cook in the same room. Some of them cook in the lounge or an enclosed space in the lounge It has been found that as many as 17 families sometimes share a single bathroom and a toilet But they never share a kitchen Households of different incomes are found to be occupying houses on the same street Higher income families also coexist with very low income families in the same houses, high income groups occupying more rooms and paying higher rents. A few street houses have a first floor accessible through a wooden staircase from the courtyard

A few flats have replaced some of the street houses in George Town as well as in Purasawalkam These flats also abut the street and the adjoining properties, but are of brick and concrete construction Very few independent bungalows with garden spaces around are found in George Town, but there are a number of them in Purasawalkam. Table number 3 5 shows the distribution of these dwelling types among the income groups

LIVING CONDITIONS AND CULTURAL NORMS

Environment and shelter are not just given by the government nor are they products of technology alone They are created by culture, the economy and the preferences of the people who inhabit them Though the supply is beyond the effective control of an individual or small groups, they have, in response to their needs and resources, organized their environment in accordance with certain generally acceptable norms. These norms are in no way static; they change If conditions are favourable they change for the better; if not, for worse Here we make an analysis of the condition of shelter and environment and cultural norms in our study areas.

One thing to be kept in mind is that production of new dwellings is almost absent in both these areas, but population

Table 3.5 · Type of dwelling and income level

Type of dwelling	George Town area — Number of households having income										Purasawalkam area — Number of households having income										Total
	Up to Rs. 100	101–150	151–250	251–500	501–750	751–1250	1251–1500	1501–2000	Above 2000	Total	Up to Rs. 100	101–150	151–250	251–500	501–750	751–1250	1251–1500	1501–2000	Above 2000	Total	
1 Hut	5	—	5	6	—	—	—	—	—	21	—	1	1	1	—	—	—	—	—	3	3
2 Row housing	4	—	6	8	—	—	—	—	—	23	—	1	1	—	—	—	—	—	—	2	2
3 Street house (One family)	—	2	7	3	4	2	2	1	2	23	—	1	5	6	6	8	5	—	1	26	26
4 Street house (Multi families)	7	10	25	44	20	10	2	1	132	132	9	22	34	44	24	17	1	5	2	136	136
5 Independent Bungalow	—	—	1	—	1	—	—	—	—	1	—	—	—	—	—	—	—	1	—	1	1
6 Flats	—	1	—	16	1	7	10	2	1	39	—	—	—	3	3	5	—	—	—	12	12
Total	16	21	40	80	34	34	6	2	5	238	9	24	37	54	33	30	6	5	2	200	200

is on the continuous increase, as new migrants come to the area on the look out for a cheap dwelling and because of natural growth Mobility is extremely low and when one manages to get a dwelling one is stuck with it and one does not even want to move The next move will certainly result in an increase in rent At present these two areas are where one can hope to get cheap accommodation, though this might be sub standard Unless compelled due to economic or other reasons people do not change houses here On the other hand, the process of increasing rent and carving out new dwelling units out of larger ones continues till the limit is reached This limit, however, is not uniform It depends on the rent one is ready to pay and more often on other resources a family has to bargain with the landlord We would also look for these limits which we could consider as 'cultural norms' of population within the given constraints of income, demands and supply

Minimum accommodation The area, number of rooms and other facilities that a household gets depend upon the amount it is willing to pay as rent as well as the environment in which the household prefers to live One may get a larger dwelling in a dilapidated shelter in a slum locality for a cheaper rent compared to that of a better house in a better locality There seems to be, however, a minimum that people of different income groups tend to fulfil with regard to their requirement in shelter Though the rent structures and environmental conditions differ substantially, the samples from George Town and Purasawalkam tend to prove the same

At least one room is a minimum requirement for any family About 50 per cent of the households in George Town have only one room, but in Purasawalkam about 70 per cent have more than one Among the economically weaker section (below Rs 250) one room seems to be the rule in both the areas Among the low income groups (250 500) 50 per cent of the families in George Town and above 80 per cent of the families in Purasawalkam have more than two rooms while the majority of middle and higher income groups in both cases have more than two rooms, a substantial percentage among them have even more than three rooms It is also observed that many low income families go in for two rooms paying higher rents This helps establish the point that the popular preference is to

have at least two rooms in a dwelling As the income goes higher the preference is to have more rooms, but four room dwellings seem to be the preferred upper limit in these areas. People do not want to have more than four rooms normally They may prefer to spend on other facilities rather than adding more rooms. (See Table 3 6)

It could also be observed by comparing tables 3 6 and 3 7 that when there is an additional room, people try to use it as a bedroom Only a minority even among the high income groups go in for a separate dining hall even when there is an additional room. Rather than have an additional room, the first preference of the people is to try to obtain a separate kitchen This is especially so in the lower income groups A majority of the people in middle and high income groups do have a kitchen, but most of them are small cubicles (See Table 3 8)

It is the area of the dwelling that matters for most people rather than the number of rooms The reason is quite obvious Instead of having two smaller rooms, they would prefer a single larger room The minimum requirements as regards the area seem to be about 10 square metres for any income group in both the study areas Of course, there are a few exceptions Among the economically weaker sections the preference seems to be about 10 to 20 square metres for low income groups The provision varies from 10 to 40 square metres Forty square metres is the preferred requirement for middle income and the higher income groups go in for a minimum of 70 square metres The distribution of dwellings with respect to income and area of dwelling is given in table 3 9

Occupancy It is the size of the households and the preferred norm on occupancy such as area per person or person per room that determines the household's norms on size of the dwelling with respect to the area and the number of rooms It is obvious that higher income groups have lesser number of persons per room and more area per person as compared to lower income groups There are many low income families with more than six persons per room and less than 2 square metres per person However, the distribution shows a trend to keep the upper limit of P P R at 4, even among the lower income groups Among the higher income groups, 3 persons per room

Table 4 6: Number of habitable rooms and income level

Number of habitable rooms	George Town — Income level										Puravenkkam — Income level									
	Up to Rs. 100	101-150	151-250	251-500	501-750	751-1250	1251-1500	1501-2000	Above 2000	Total	Up to Rs. 100	101-150	151-250	251-500	501-750	751-1250	1251-1500	1501-2000	Above 2000	Total
1 One room	15	17	32	41	11	1	—	—	—	117	8	20	21	15	2	1	—	—	—	67
2 2 rooms	1	2	6	28	8	12	—	—	—	57	4	10	24	11	2	1	—	—	2	64
3 3 rooms	—	2	2	9	8	6	—	2	—	29	1	2	2	13	3	4	1	—	—	39
4 4 rooms	—	—	—	2	6	6	—	1	—	15	—	—	—	4	—	3	—	1	—	10
5 5 rooms	—	—	—	—	—	6	—	4	—	10	—	—	—	—	—	—	—	—	—	4
6 6 rooms	—	—	—	—	—	—	—	—	—	4	—	—	—	—	—	—	—	—	—	4
7 More than 6 rooms	—	—	—	—	—	—	—	—	—	6	—	—	—	—	—	—	—	—	—	5
Total	16	21	40	80	33	34	—	5	9	238	9	21	37	54	30	6	—	—	5	200

Table 37 Number of bedrooms and income level

Number of Bedrooms	George Town										Puravankalam									
	Income level										Income level									
	Up to Rs 100	101 150	151 250	251 500	501 750	751 1250	1251 1500	1500 2000	Above 2000	Total	Up to Rs 100	101 150	151 250	251 500	501 750	751 1250	1251 1500	1500 2000	Above 2000	Total
1. One room	1	4	7	32	15	18	3	—	—	80	1	5	13	18	28	18	2	1	—	86
2. 2 rooms	—	1	1	8	5	10	1	2	—	28	—	1	1	2	3	10	2	3	1	23
3. 3 rooms	—	1	—	—	1	2	1	3	—	8	—	—	—	1	—	1	1	1	—	4
4. 4 rooms	—	—	—	—	—	—	—	—	1	1	—	—	—	—	1	1	1	—	1	4
5. More than 4 rooms	—	—	—	—	—	—	—	—	2	2	—	—	—	—	—	—	—	—	—	—
6. No exclusive bedrooms	15	15	32	40	12	4	1	—	—	119	8	18	23	33	1	—	—	—	—	83
Total	16	21	40	80	33	34	6	5	3	238	9	24	37	54	33	30	6	5	2	200

Table 38 : Kitchen size and income level

| Kitchen size | George Town | | | | | | | | | | Purasawalkam | | | | | | | | | |
| | Monthly income level of the household | | | | | | | | | | Monthly income level of the household | | | | | | | | | |
	Up to Rs 100	101-150	151-250	251-500	501-750	751-1250	1251-1500	1501-2000	Above 2000	Total	Up to Rs 100	101-150	151-250	251-500	501-750	751-1250	1251-1500	1501-2000	Above 2000	Total
1 No separate kitchen	13	15	24	22	2	—	—	—	—	76	9	13	14	1	—	2	1	—	1	41
2 Below 1 sq mtr	1	—	—	—	—	—	1	—	—	2	1	—	1	—	—	1	—	—	—	3
3 1 to 3.9 sq mts	—	4	10	19	6	7	1	—	1	48	—	2	5	5	1	5	5	—	2	25
4 4 and above sq mts	2	6	39	24	27	5	5	1	3	112	8	14	13	26	28	30	5	2	5	131
Total	16	21	40	80	33	14	6	3	5	238	9	24	37	54	33	30	2	2	2	200

Table 39: Area of dwelling and income level

Area of dwelling	George Town										Puraswalkam									
	Up to Rs. 100	101-150	151-250	251-500	501-750	751-1250	1251-1500	1501-2000	Above 2000	Total	Up to Rs. 100	101-150	151-250	251-500	501-750	751-1250	1251-1500	1501-2000	Above 2000	Total
1. Below 10 sq metres	—	—	—	—	—	—	—	—	—	14	—	—	—	—	—	—	—	—	—	3
2. 10-19 "	—	—	—	—	—	—	—	—	—	54	—	—	—	—	—	—	—	—	—	41
3. 20-29 "	—	—	—	—	—	—	—	—	—	56	—	—	—	—	—	—	—	—	—	44
4. 30-39 "	—	—	—	—	—	—	—	—	—	48	—	—	—	—	—	—	—	—	—	48
5. 40-49 "	—	—	—	—	—	—	—	—	—	14	—	—	—	—	—	—	—	—	—	13
6. 50-74 "	—	—	—	—	—	—	—	—	—	22	—	—	—	—	—	—	—	—	—	26
7. 75-99 "	—	—	—	—	—	—	—	—	—	16	—	—	—	—	—	—	—	—	—	8
8. 100-199 "	—	—	—	—	—	—	—	—	—	8	—	—	—	—	—	—	—	—	—	23
9. 200 and above	—	—	—	—	—	—	—	—	—	6	—	—	—	—	—	—	—	—	—	4
Total	16	21	40	80	34	34	3	3	5	238	9	24	37	33	30	6	5	—	2	200

seem to be the preferred limit Table 3 10 shows that 2 to 3 is the popular norm. A P P R of 1 5 and 2 respectively might be considered as the perceived threshold of overcrowding of high income group and other income groups As regards the area per person, a minimum of 2 square metres among lower and middle incomes and 5 square metres among high incomes seems to be the popular norm (See Tables 3 10 and 3 11)

Housing density and open spaces People cluster together when there is more demand than supply of environment and shelter They cluster near their work places when daily commutation is a difficult problem This is the reason why people live densely in and around CBD As far as a shelter is available density and availability of open spaces does not seem to worry them much George Town has one of the highest densities in the city, so has Purasawalkam George Town has almost reached the stage of saturation as no more squeezing in is possible unless structural changes take place But in Purasawalkam sub-division the process is still continuing People have preferences and desires regarding their requirements of occupancy They may slash down their demands when the rents go high But there is a limit beyond which they may not cut down their requirements This in a way affects the housing density but it is untrue to call the resulting density as anything but a cultural norm However, most people would prefer less crowded areas with open spaces, provided all other factors are equal

Air purity and noise Clean air, calm and quiet as well as visual order are considered good qualities for a living environment These three are supposed to affect people biologically and psychologically But all these qualities have become rare in most urban environments People have developed a kind of tolerance to live with the hazards of unclean air, noise and visual chaos Referring to our study areas as no attempt was made to quantify the impurity of air the amount of noise and the chaos it is difficult to assess the cultural norms regarding these aspects However, heavy incidence of dust and smoke are observed in some quarters in the study areas The air especially on the northern side of Purasawalkam is visually unclean Heavy smoke from the potters kilns obstruct even the visibility in that area It is accompanied by a pungent smell A nasty

Table 3 10 · Persons/habitable room and income level

Persons/habitable room	George Town Income level										Parasumuktam Income level									
	Up to Rs 100	101-150	151 250	251-500	501-750	751-1250	1251-1500	1501-2000	Above 2000	Total	Up to Rs 100	101-150	151 250	251-500	501-750	751-1250	1251-1500	1501-2000	Above 2000	Total
1 Up to 1	—	1	—	5	5	8	—	2	2	23	—	—	—	8	3	3	—	2	1	26
2 1.0-1.4	1	3	5	8	7	5	—	1	—	13	—	3	3	8	6	4	1	1	1	27
3 1.5-1.9	1	1	7	21	5	8	—	1	—	11	3	2	7	6	6	1	—	—	—	22
4 2.0-2.9	7	4	10	21	7	7	1	—	3	57	3	10	8	9	12	5	1	1	1	51
5 3.0-3.9	4	5	9	11	4	9	—	—	—	44	2	6	7	7	6	5	1	—	—	35
6 4.0-4.9	3	3	4	9	5	4	—	1	—	18	1	3	1	4	1	4	1	—	—	16
7 5.0-5.9	2	3	3	9	—	—	—	—	—	22	—	4	1	4	—	—	—	—	—	11
8 6 and above	2	3	2	5	—	5	—	—	—	40	—	4	4	4	—	—	—	—	—	12
Total	16	21	40	80	33	34	3	6	5	238	9	24	37	34	33	30	6	5	2	200

Table 3.11 : Area per person and income level

| Area per person | George Town | | | | | | | | | | Puravakkam | | | | | | | | | |
| | Income level | | | | | | | | | | Income level | | | | | | | | | |
	Up to Rs. 100	101-150	151-250	251-500	501-750	751-1250	1251-1500	1501-2000	Above 2000	Total	Up to Rs. 100	101-150	151-250	251-500	501-750	751-1250	1251-1500	1501-2000	Above 2000	Total
Below 1 sq metres	2	—	4	4	—	—	—	—	—	10	1	—	—	—	—	—	—	—	—	1
10-19 "	5	4	5	4	3	—	—	—	—	21	—	6	1	—	—	—	—	—	—	7
20-29 "	5	13	8	8	1	1	1	—	—	37	1	6	4	2	1	1	—	—	—	15
30-39 "	2	4	4	10	4	1	—	1	—	26	1	4	6	4	2	—	—	—	—	17
40-49 "	—	4	4	7	2	3	1	1	1	23	1	2	5	3	1	1	—	—	—	13
50-99 "	2	7	11	20	11	7	1	1	2	62	2	3	17	14	6	4	1	—	—	70
100-149 sq metres	—	1	3	9	4	11	—	—	—	28	1	1	2	2	1	2	3	5	2	20
15 and above sq metres	—	2	1	11	8	10	3	1	—	31	2	2	2	3	1	1	1	—	—	37
Total	16	21	40	80	33	34	6	5	3	238	9	24	37	54	33	16	6	5	2	200

Table 3.12 : Water supply and income level

Water supply	George Town — Monthly income level of the Household										Puraswalkkam — Monthly income level of the household									
	Up to Rs 100	101-150	151-250	251-500	501-750	751-1250	1251-1500	1501-2000	Above 2000	Total	Up to Rs 100	101-150	151-250	251-500	501-750	751-1250	1251-1500	1501-2000	Above 2000	Total
1 Tap—exclusively provided	—	2	6	19	13	21	5	2	5	73	—	4	13	16	18	11	6	5	2	75
2 Tap-shared	5	13	18	45	16	13	1	—	—	111	9	18	22	37	13	18	—	—	—	117
3 Common well	—	—	3	4	2	—	—	—	—	9	—	—	1	1	—	—	—	—	—	2
4 Public stand-post	11	6	13	12	2	—	—	—	—	44	—	—	—	—	—	—	—	—	—	—
5 Separate Borewell	—	—	—	—	—	—	—	1	—	1	—	2	1	—	2	1	—	—	—	6
Total	16	21	40	80	33	34	6	3	5	238	9	24	37	54	33	30	6	5	2	200

Table 3 13: Toilet facility and income level

Toilet facility	George Town										Pussawalkam									
Income level	Up to Rs. 100	101-150	151-250	251-500	501-750	751-1250	1251-1500	1501-2000	Above 2000	Total	Up to Rs 100	101 150	151-250	251 500	501 750	751-1250	1251-1500	1501-2000	Above 2000	Total
1 Separate dry	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
2 Separate water bourne	—	2	4	14	16	25	5	2	5	73	—	1	4	18	17	22	6	5	1	74
3 Sharing dry	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
4 Sharing water-bourne	9	13	23	55	17	9	1	1	1	136	6	22	31	34	16	8	—	—	1	118
5 Public convenience	7	6	8	8	—	—	—	—	—	29	3	1	2	2	—	—	—	—	—	8
Total	16	21	40	83	34	34	6	3	5	238	9	24	37	54	33	30	6	5	2	200

consists of a number of bullock carts collecting the garbage from the streets once a day There seems to be no common norm regarding the discard of solid waste Most of the households both of lower and upper income groups, throw their garbage on the streets Dustbins and garbage cans are found to be located at certain streets but nobody seems to use them However, the amount of solid waste produced by the families is not very large It consists mainly of vegetable and fruit peel and waste paper Metal cans and containers are seldom discarded as waste as they are used to keep household daily needs in the kitchen

Conclusion

The study has shown that environmental and housing requirements differ from one population group to another It depends not only on the income but also on the preferences of the people as well as their environmental perception Yet it can be said that income is a major indicator as to how much a family can pay for housing and where they want to live It often leaves no choice

What we have seen is a struggle for a minimum habitat, the minimum defined by a set of realities like income, rent, etc and not by any scientific criteria or official prescriptions This struggle gets submerged among other problems for the very low income population, but it is a major problem for those who have a regular income and when the problem of food at least is relatively light Leaving aside the high income people who live in these areas by choice because they own their houses or because their business interests compel them to be there, the rest of the population are there only because of the cheap rent and nearness to work Most of them do not hope for better accommodation unless their destinies change consequently, they have developed a sort of apathy towards their habitat conditions human life diminished to mere existence as far as the physical quality goes In fact if one develops such an apathy one can survive with little worry if not one has to struggle to keep up to one s own preferences which are never fulfilled The choice then lies somewhere between the two

BELA PRATAPGARH—A small TOWN IN U P *

Living environment including that related to shelter differs widely from one part of the country to another Even within the states like U P there are marked regional differences An attempt has been made here to study the environmental aspects of shelter in a typical small scale city of central Uttar Pradesh

Bela Pratapgarh is situated in the Ganga Ghagra doab on the banks of the Sai, a small tributary of the river Ganga The doab as a whole is a plain area with the average height rarely above 135 metres above sea level

The present population of the town is about 30,000 and its area spread no more than 8 5 sq km The river Sai used to form the northern boundary of the city municipality, but now it divides the city into two parts It is located in the midst of vast tracts of agricultural land, although not very fertile, and equally a people steeped in the traditions of bygone days No matter how we look at the problems of this area and how we define development, the city with its hinterland has not yet shown any signs of emergence from a backward agriculture and subsistence urbanization

The city is a little more than 100 years old It appears to have been founded in 1868 During the First War of Independence in 1857, the Rajah of Pratapgarh, supported the British In 1958 the district of Pratapgarh, with its headquarters at Kuswapur, about 60 km west of Bela Pratapgarh was established Very soon the district headquarters were shifted to old Pratapgarh, which is about 5 km south west of Bela Pratapgarh town A decade later the district offices shifted to Belaghat village which formed the nucleus of the present city Bela Pratapgarh Municipality was formed in 1873

Since its very inception, Bela Pratapgarh has functioned as a service town catering to the needs of its immediate hinter land No industry, major, medium or small ever flourished in the city and hence the pace of its growth and development has been slow Even to day, it grows only at a snail s pace perhaps at the same rate at which its agricultural hinterland has grown

Table 3 14 : Occupational structure of Pratapgarh town 1961-1971

		1961		1971	
		Males	Females	Males	Females
1	Cultivators	233	80	230	70
2	Agricultural labourers	7	7	7	7
3	Mining, live-stock, hunting etc.	40	4	50	5
4	Household industry	400	152	500	200
5	Manufacturing labourers	596	43	600	70
6	Labourers engaged in construction	200	2	245	5
7	Workers, Trade and commerce	1752	131	1995	155
8	Workers, transport, Storage and Communication	545	1	800	3
9	Workers in other services, education, medical, religious	2361	346	2550	400
10	Total workers	6140	766	7321	637

Economic Base

The city has no industrial base. A few cottage and small scale industries located in the town may be mentioned here There is a tobacco factory preparing chewing tobacco in very small packets There are 5 saw mills employing about 65 persons Furniture and packing crates are made here There are also 3 powerlooms In Mahuli and Chilbila, the work of packing of *suth* into bundles is done There are some goldsmiths in the Chowk area

But all these industries have no visible impact upon the economy of the town As a result, the employment seekers from the district flock to big industrial cities like Allahabad, Kanpur, Bombay, Calcutta, Ahmedabad, and Delhi in search of jobs Pratapgarh town has no opportunities for them

Most of the merchants deal in consumer goods A sizeable number of the traders deal in machinery, implements and their

spare parts, tools, seeds and fertilizers needed by the peasants in the upland. There are shops selling diesel engines, electric motors, iron pipes and other allied articles for tube wells and pumping sets. There is also an agency for tractors. Nearly 8 shops deal in bicycles and about a dozen traders deal in radio sets and electrical goods. A noteworthy economic activity of the city is the transport business. There are three big motor vehicle owners with a fleet of 250 motor vehicles and trucks which ply in various parts of U P

As can be seen from the table, administration and trade are the main functions of the town. The economy of this feudal town has been stagnant for quite some time. It exists on petty and small business and services offered to the poorer people of the hinterland while the rich bypass and go to larger places like Allahabad.

Consequently, the population growth has been mainly due to natural increase. In the last decade it grew only by 30 per cent (see Table 3 15) In 1971, it had a population of 27,909. A sizeable portion of this population consists of employees in the various offices, the police constables, the traders the railway and roadways workers. Most of them live by themselves leaving their families behind in the villages

Internal Structure

As a by product of the British rule, the zamindari system and feudal social system, city building activities have been based on the exploitation of the rural masses. Nearly 30 per cent of the houses and quarters have been built by advocates, 40 per cent by the traders and the remaining 30 per cent by others. The Sikh refugees have also contributed a lot to the growth of the town since 1947. And now there is a refugee cloth market overshadowing the main cloth market of Chowk and also a refugee colony. The rural traders and merchants and the rich farmers intending to enter the field of business also aspire to own a shop of their own in the city. Until very recently when the bank rates were raised, it was considered safe and profitable by the wealthy merchants and landlords to invest their money in buildings in the city as they fetched good!

rent regularly Many of them settled down in the city Many merchants also have moved to the city

Bela Pratapgarh spreads on either side of the Allahabad-Faizabad road On the western side of the Allahabad Faizabad road, it is spread in the shape of two triangles, whose base is common—Ghantaghar—Kutchehry road and whose vertices are Bhangwa Kichungi and Bela Devi temple On the eastern side of Allahabad Faizabad road, the city has spread in an elongated shape The new extensions of the city, on all sides except the east, are ribbon developments along the radial roads

As the city had its origin in the villages and the process of urbanization has been slow, it still exhibits rural characteristics along with semblances of urban functions It has not yet lost its rural colour and background The four original villages namely, Belaghat, Balipur, Sahodarpur and Karanpur are still found in their diminished size Agriculture is the main source of their livelihood They have still their farm holdings spread over many hectares on the outskirts of the city to the north, south and the west At places these tracts of agricultural land are surrounded on all sides by pucca buildings and the city is slowly encroaching some of these lands

The 'urban part of the town is spread around a small CBD and the district courts and the offices, inhabited by traders, officers advocates and the employees in the offices, dairy and poultry farmers and casual workers including a large number of rickshawpullers There are some craftsmen too like gold smiths who live close to the CBD in the heart of the city The major means of intra city conveyance are bicycles cycle-rickshaws, motor cycles and scooters Only a few families have private cars On the whole, the city gives a rustic and dirty look, and so it is

The drainage of the city is awful The drains are open There is no outlet for the water leading to stagnation of filth everywhere Wherever one goes one sees the filth, one smells the filth and one feels the filth During the rains, these drains overflow and the roads are covered with this filthy water Hence the whole city is a breeding place for mosquitoes and disease The garbage is also not regularly lifted except for some prominent areas of Civil Lines, Chowk and Paltan Bazar, etc In some mohallas garbage remains heaped for many days

At other places, it may be littered hither and thither on the
sides of roads

Fig 6
Bela Pratapgarh Town Land use Structure

LEGEND

Residential

Commercial

Public

Educational

Agricultural
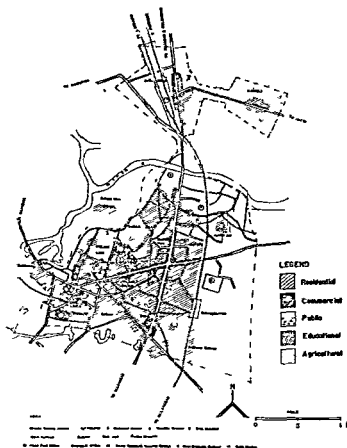
Types of neighbourhoods The whole city presents three
types of neighbourhoods The one is the amorphous area around
CBD and on the sides of the Allahabad Faizabad road. The

other is the planned area—the Civil Lines and the new extensions and the third is the slum area

The areas around the main shopping and business centre of Chowk have *pucca* buildings They are made of brick and cement or lime mortar The streets and lanes are narrow and zigzag This is the area which developed first as the nucleus of the new city Most buildings have two or three storeys Like most Indian cities this happens to be a very densely populated residential area as well The frontage of the buildings has shops with residential space at the back

The planned areas of the city comprise state government colonies the canal colony and some other residential areas mostly inhabited by rich merchants, the propertied class and the leading advocates of the city These areas of the city are comparatively cleaner; most of the bungalows and flats have modern or pseudo-modern looks Most buildings have basic amenities The roads and streets are straight and wide according to standards laid down by the government The vacant space between bungalows and blocks of flats is common The lifting of garbage and the cleansing of drains are also done regularly Civil Lines, Paltan Bazar, the urban part of Balipur, Dahalaman, Chilbila and Mahuli come under this category of planned area

Slums are found in Purani Abkari and parts of Padava, Dharamshala ward Sadar Bazar and Begam wards These areas are conglomerations of all sorts of *pucca* and mud houses The houses are generally small, ill ventilated, low roofed or roofed with country tiles or tin sheets The roads streets and lanes seem to be lost in the wilderness of these houses There is no proper arrangement for removing the garbage which is found littered almost everywhere and nobody appears to be concerned about it The filth and stagnant water of the open drains overflows and spreads on the roads and streets if they exist at all As a result there is an atmosphere of filth, dirt and a foul smell everywhere rendering these areas completely unfit for human habitation The tenements are mostly single or double roomed with 7 or 8 inmates Most of these areas are inhabited by Muslims who are engaged in the dairy or poultry business Some of them are hawkers or vendors selling various articles. Some of them earn their living by such odd jobs as

repairing of utensils, umbrellas and pens, etc Some are butchers and sell meat The slum area of Purani Abkari is mostly inhabited by the labour class Dire poverty and human degradation are the rule rather than the exception here

The densest part of the city consists of Chowk (Makandooganj) Begam ward, Padava, Dharamshala ward, Sadar Bazar, some portion of Sahodarpur, Hadiganj and Bharavapur. It has a mixed population of upper middle class lower middle class and labour class Nearly 10 per cent of the people in these areas belong to the upper class of society In the dwellings of the lower middle class family, 5 or 6 persons reside in one or two room tenements

Areas of intermediate densities extend over the middle parts of the city consisting of Paltan Bazar, School ward, Babaganj and some portions of Balipur and Chilbila They are mostly inhabited by upper class and upper middle class people Leaving aside the government colonies, most of the bungalows and flats are found in this part A family of 6 persons generally resides in a bungalow which covers, on an average, an area of 300 sq metres The dwellings in this area are clean, well maintained and are equipped with all the necessary amenities

The sparsely populated areas cover the outlying parts of the city The density of population in these areas is below 200 per hectare Civil Lines, Dahalaman, some part of Balipur, Mahuli and the villages coming within the city limits may be bracketed into this category Civil Lines, Dahalaman and Balipur are inhabited by the upper middle class comprising advocates and Government officers Mostly well furnished bungalows and flats built on modern designs are found here Nearly 60 per cent of the buildings in Mahuli belong to the high merchant class dealing in grain and tat patti Peasants, farmers and artisans inhabit the villages

The residential part of the city covers about 70 per cent of the total area As has already been mentioned in the foregoing paragraphs, it can be divided into three parts (a) the old unplanned part with 3,000 small and big houses out of a total of 4 618 covering 70 per cent of the residential area (b) The planned and semiplanned area with 400 dwellings covering 15 per cent of the total area, and (c) the village and slum areas

with (800 plus 300) dwellings spreading over 15 per cent of the residential part of the city (See Table 3 16)

Shelter Condition

The poor economy manifests itself in the housing conditions too Between 1961 and 1971, the city added 853 households to its existing population But the increase in the number of houses was only 394 All these additions were not new either. They were made partly by subdividing the existing large ones. A large part of new additions were *kuchcha* buildings and huts Apart from some reserved parts, the rest of the city gives a rundown appearance

On the basis of the existing conditions, the shelters in the city may be put under five categories Government colonies, private flats and bungalows in the Civil Lines of Paltan Bazar, 50 per cent of the houses in Sadar Bazar, flats in Baliput and some bungalows and flats in Bhairavapur may be placed under the first category of good houses Their condition is good; maintenance is better here than elsewhere, and they are better furnished They are generally whitewashed and repaired periodically Such houses have drawing rooms, 2 or 3 bedrooms, bathrooms, toilet, kitchen and one or two verandahs The number of such houses is only 20 per cent of all the dwellings in the city These are the products of either left over feudalism or the new administrative class

The houses with *satisfactory conditions* come under the second category Such houses have only one or two bedrooms and accessories like kitchen, toilet and verandah They belong to the middle-class people of moderate income group They are generally not well maintained or repaired Only very essential repairs are done Some large old houses in the CBD also come under this category Such houses constitute about 25 per cent of all dwellings and are spread over the whole city

The houses which are badly maintained may be placed under the third category These include the remnants of the old feudalism and the poor labour class The old mansions of former landlords or wealthy persons of the city, now rented to poorer people as well as the tenements owned or occupied by the low income group people belong to this category These

Table 3 16 · Land use of Bela Pratapgarh

Functional zones	Per cent of total area	Areas where these functions are clustered
Business area	10	Extends along the roads (Allahabad Faizabad road, Kachehchri Jail road, Kidganj ul ah road, Rani Jageswari Kuwar road, Station road)
Residential area	70	Extend all over the city except some open sreces and cultivated lands
Agricultural area	5	Extend in different parts of the city Mostly they are situated in Sahodarpur, Hospital Ward (a little part) Balpur and other included village areas
Administrative Zone	9	Mostly Civil Lines and Police Lines reoccupyned by this function Only two offices are located in different parts (Tehsil in Bab:ganj) and Supply Offices in Bhangava)
Educational and Cultural Centres	1	Little part of the city is occupied by this function The Educational Centres are located in different parts of the city, but cultural centres are mostly located along the Allahabad and Fazabad road
Land used in Industrial and Rail Transport	3	Isolated Industrial Centres are located in different parts of the city as a household industry such as jewellery, motor servicing handlooms, carpentry, etc
		But a bigger part of the city is occup ed by rail transport

tenements have only one or two rooms with a verandah Most of them do not have any toilet facilities. Inmates use the open spaces for nature's call The absence of bathrooms and kitchens is universal The verandahs are generally used as kitchens Nearly 30 per cent of the total dwellings fall under this category

The single room slum dwellings with no arrangement for water electricity and proper ventilation form 20 per cent of the shelters in the city which belong to the fourth category The essential accessories like bathrooms toilet and kitchen cannot even be imagined there The same room is used as kitchen living room and bedroom etc The inmates of the house them selves make the repairs and replacements in these shelters when they become unavoidable

The *kachcha* houses with mud walls and the roofs of tiles and half *pucca* houses in the remnants of villages have generally good repairs and replacements Nearly 90 per cent of such houses have no bathrooms and toilets but they have kitchens, verandahs 4 to 5 living rooms and a store room Normally they have an upper storey generally used as a store room. They use the open fields as a lavatory and wells as bathing places Such houses constitute 5 per cent of the shelters in the city

Most of the houses even in the better part of the city have no toilets and the inhabitants use drains lanes and the sides of the streets and roads to ease themselves This makes the whole environment of the city dirty The air is filled with the foul smell of urine and night soil There are two reasons for this. Firstly the people generally lack a civic sense or a sense of public hygiene secondly there is no water borne sewerage and nobody else but the people belonging to a certain Harijan caste called Bhangis will do the work of sweeping and carrying night soil The Bhangis are untouchables and their work is considered as the dirtiest Out of tens of villages only one or two families of sweepers are found in the rural and urban areas This number is quite insufficient for serving the privies if there be any in the rural side and the other people are not ready to do the job at any cost Hence the people in the rural and urban areas do not have privies in their houses But it is more due to the lack of habit and practice than due to any difficulty in having at least pit

privies Soak pit latrines are costlier for the majority to afford and have not yet become common

Summing up

Living conditions and the struggle for a decent habitat condition in the three urban settlements have been discussed in this chapter It might seem that we have looked specifically for the worst, but this is the major urban condition, irrespective of size, location and culture of the urban settlement in India. Whether in Bela Pratapgarh, in U P or in Madras, the premier city in Tamil Nadu state, the physical quality of life and struggle for shelter is not much different for the majority who are poor Very high income groups manage to escape the problem as always For those who are just above the poverty line, with their middle-class values looking up to the higher class and down to the lower class, larger places offer hell, while smaller places are relatively better But unfortunately these smaller places offer *no economic opportunities for them Consequently*, they have to learn to live with hell, albeit grumbling The official reaction to the urban problem in India is conditioned by these middle class values

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4

The Quality of Life in Rural Settlements

IN THIS chapter we present three case studies, the rurban region of Kerala, a small village in Orissa, and a tribal village from Arunachal Pradesh Kerala has been selected mainly because of the unique settlement pattern In the habitat condition with respect to shelter and services also Kerala generally fares better than other states There are no very large cities and slums are also not extensive We will focus our attention particularly on the rural areas of Kerala which are more than rural compared to other parts of India, may be we can call them rurban Villages in other parts of India are not all uniform to be summarised in two case studies These case studies are presented to give a closer look at two villages of two different situations

KERALA TRADITION GIVES WAY*

The Settlement Structure

Unlike as in the other parts of India the Kerala region has a very different pattern of spatial organisation of settlements. The settlement pattern could well be described as 'Scattered Homesteads', the entire population being thrown more or less uniformly into the entire geographic area of Kerala, with concentration at nodal points The density is higher towards the shoreline than in the high lands

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* Data for this part was collected by R Madhuri Menon, with the help of the Dept of Town Planning Kerala

In this singular pattern of settlements it is very difficult to distinguish one settlement from another, or an urban area from its suburbs and the adjoining countryside The develop ments are contiguous Obviously a village in Kerala is not a small unit of settlement, nor a well knit social or physical entity It does not have a well defined built up area or an identifiable physical boundary either Villages are identified and delineated only as administrative units

In such a pattern, the homestead, which may be defined as a dwelling unit, with courtyard, apartment buildings, front rear and side gardens, spaces enclosed by a boundary fence or wall, could be identified as a primary form of settlement The assembly of such homesteads has given rise to a scattered pattern, that is pervasive in both rural and urban areas of Kerala State

The houses are scattered, with each dwelling unit surrounded by the land belonging to the occupant house hold The dwelling unit and its appurtenant land holding is usually fenced around, for purposes of privacy and identity, which leaves houses at a distance from each other The open spaces around each house are densely cultivated with coconut and arecanut palms, plantain trees and other fruit, vegetable and garden crops, which shield the house from view It is of special note that the physical separa tion of houses by intervening garden spaces, bounded by fences is a common feature even among the lower caste or poorer sections of the people

The fenced compound is the key feature in both rural and urban areas Hence, it becomes difficult to distinguish between a rural area and an urban area by observing the physical compactness or spatial distribution of homesteads The dispersed matrix of settlements in Kerala therefore, takes the form of a continuum, punctuated by semi urban, semi nucleated nodal points at regular intervals with scarcely any discernible difference to mark the boundary of urban or rural area

The scattered pattern of homesteads in Kerala was a consequence of various social and cultural practices The earliest settlers were the farmers who parcelled out their holdings for cultivation, and located their homesteads away

need of the landlords for cultivators and a labour class
to tend the fields As a result of this no less than 760 farms
of land tenure, varying from proprietory ownership to the
most transient form of tenancy devoid of all security, were
evolved Fragmentation of land holdings took place as the
land tenure system became established, and the disposal
of homesteads was further enhanced

Fig 8
Pattern of Homestead Settlements around Trichur
in Central Kerala
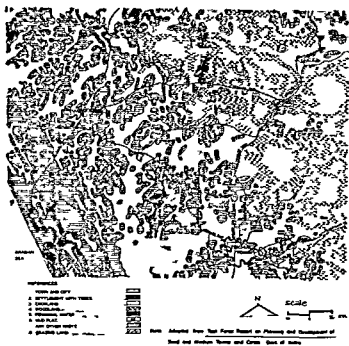
Another noteworthy factor that requires special mention
is the matriarchal system of succession (marumakkathayam)
which is still practised in many parts of the state. This system
gave rise to large joint families. Land parcels were managed

by the joint family which was the accepted mode of life, and members were entitled only to a share of the income Thus, sub-division of large plots and consequent nucleated formation of houses, was considerably restricted The advent of the patriarchal system in very recent years has now given rise to partitions of holdings among the members of the joint family, but the basic character of the people of organising a home in the middle of a garden continued, even when the economic forces made drastic reductions in the size of the plot

Urbanization

Urbanization has a different connotation in Kerala compared to other places In spite of the high pressure on agricultural land and the lack of employment - opportunities in the agriculture sector, very high literacy (above 60% which is the highest in India), and a high density of population, the degree of urbanization reported in the 1971 Census of India is 15 11% There were 960 village panchayats, 3 municipal corporations, 27 municipal towns and 57 non municipal towns in 1971 This low percentage of urbanization reported does not mean that Kerala is poorly served by urban services nor does it reflect the people's adaptation to urban life It shows only that the general definition applicable to urban areas cannot be applied to Kerala

The formation of semi urban, semi nucleated nodes at regular intervals has been necessitated by the demand for services and amenities by the inhabitants of scattered settlements The rural urban knot is the unique phenomenon which characterises these service centres, like 'neighbourhood centres The knots which take the form of nucleated non residential activities are urban in character, and are usually located 8 10 km apart Many of these knots house services like banks, shopping, markets, service industries and even places of higher education Innovations diffuse more quickly in Kerala through these knots, which are lowest in the hierarchy of service centres Below the knots are the homesteads which are common in urban and rural areas alike

The existence of these knots, which are urban in character, conveys the impression of advanced urban influence in the rural

areas of Kerala Simultaneously, the continued existence of dispersed dwellings in extensive plots together with the incidence of agricultural lands in the urban areas, tends to portray an apparently rural character to the urban area

An analysis of the rural urban differences with respect to accessibility to the social services and the provision of certain amenities as well as the level of literacy, social change and people's adaptations to the modernised way of living will show less marked differences in Kerala as compared to other areas in India This is reflected in the production and provisions of shelter also   There is not much of a difference between an urban or rural house in the arrangement of rooms, use of material or the production techniques   Differences exist only between classes in urban areas as well as rural areas This will be revealed when we analyse the production programmes in a later part of this report   Density may be higher in urban areas and the compounds of rural houses may be larger as they are mostly determined by land values

People and Society

Kerala is predominantly Hindu and the general structure of Hindu society, religious beliefs and practices are not fundamentally different from those that exist in other parts of India Hindu society is organised on the basis of the caste system and Kerala is no exception   The caste hierarchy itself consisted of the Namboodiri Brahmins at the apex and the outcastes —the *Paraya* and *Pulaya* at the lowest rung   One of the notable features particularly among higher castes was the joint family system, and the large *tharavad* (joint family property) which could accommodate all the members belonging to the family without separate dwellings for married members   The matriarchal system of succession was practised in most parts   All the members of the family had a right only to a share of income from the family, the property was managed as a whole   The change from joint to nuclear families in recent years has   how ever led to the partition of land, consequent to the advent of a patriarchal system of succession in place of the *marumakkathayam*

Various social values arising out of the caste system played

significant roles in the evolution of housing and settlement patterns in the State. A tendency most noticeable in Kerala is the physical grouping of people belonging to the same caste to form a sector which is identifiable despite the physical isolation of individual houses. For example, the fisher folk usually congregate in a locality near the seashore, but even in coastal areas, the wealthy Hindu, Muslim or Christian would seldom locate his dwelling in a plot sandwiched between fishermen. Similarly, the infiltration of lower castes into areas occupied by higher castes was seldom permitted, though this traditional pattern is now losing its relevance.

Other Hindus, Christians and Muslims emulated the model set by the high caste Hindus. The physical pattern of their holdings, plot subdivision, building designs etc., became the accepted model even among other castes. In respect of building design, the influence of the traditional carpenter was pervasive, despite caste differences, so that traditional Christian or Muslim houses appear similar in design to that of a high caste Hindu. The Thatchashastra (an ancient treatise on domestic architecture) was followed by master craftsmen. These rules had a touch of religious sanctity about them and considerations often had a caste bias.

The caste system has brought in its wake certain significant physical phenomena, such as privacy. This is a unique cultural trait of the Malayalee or Keralite. Privacy evolved out of the accepted practice of untouchability, which necessitated segregation between higher and lower castes. The element of privacy was extended even within the household, where segregation between sexes was also practiced.

The most important economic factors which have influenced the pattern of settlement and the individual dwellings are the cropping pattern, the occupational structure and the land tenure system. The cultivation of land was done by tenants and operations connected with it, were conducted in the homestead. This gave rise to a pattern of settlement where the tenants were usually accommodated close to the paddy fields, while the threshing ground, granaries and stores formed part of the landlord's house.

Developments in the recent past have considerably changed the social character of the Malayalee. The caste system has

become considerably weakened and diffused Economic parameters have replaced social values in respect of determining interaction between various castes Employment opportunities, higher literacy, development of communication and transportation, remuneration in respect of service opportunities etc., are the important factors that have brought about this trend of change

The economic class system is thus fast replacing the caste particularly in urban areas The major factors determining size, location and structure of house now are finance and economic status, rather than position in the caste hierarchy

Shelter Types

The physical and environmental conditions—very high incidence of rain, high humidity as well as hot summer—gave rise to the unique shelter types of Kerala Traditionally all the houses used to have sloped roofs of either tiles or thatches with an all round *pyol* or verandah The high pitched roof with its gables predominate the traditional rural as well as the urban scene However, several varieties have evolved to suit the cultural patterns and status of different classes and communities

Traditional shelter types could thus be grouped mainly into three

1 High caste and rich landlords houses—with courtyards and other appurtenants

2 Labour class and poor man s house

3 Tribal houses.

Traditional feudal high caste house The typical traditional upper class/caste—mainly Nair and Namboodiri—home usually consists of a main building enclosed by an embankment equipped with a gatehouse and situated in the middle of an orchard The main building faces the east and may be single or double storeyed and is rectangular, with the four wings and a courtyard in the centre This type of house is called the *Nalukettu*. The principal apartments on the ground floor face inwards into the courtyard The number of pillars around this central courtyard are in multiples of four and range up to 16 Seven winged houses with two courtyards were another variation

In the traditional two-storeyed house, there is generally a verandah on the ground floor, supported by thin pillars of teak wood, in addition to the typical ground floor plan described above. This is used as a parlour. The upper storey or *maliga* is used for sleeping, as a study, or as an office room. The houses of both rich and poor classes follow the same pattern. Although the pattern of building is associated with Nair families, the form is frequently followed by Christians, Muslims and other communities as well.

The building is located in an enclosed courtyard which is cultivated with coconut and other trees. There would generally be a cattleshed, and sometimes an excavated tank for bathing purposes, and a well at the rear of the kitchen, for directly drawing water to this area. The latrine is situated at a distance from the house and is generally an enclosed pit latrine.

The roof of the main dwelling would generally be sloping, the framework often being of wood. The ends of the superior ridge pole of the roof are turned upwards to form gables which are typical of Kerala. The ceiling of many of these houses is made of wood. This serves as an attic, and provides a storage space between the ceiling and the roof, access to which is provided through a small trap door from one of the rooms. Ventilation to this space is provided by the *mukhandaram* described above.

At present houses strictly adhering to this type are very few. The Christians especially the Anglo-Indians and the rich Muslims also used to build this type of house, but gradually its form underwent changes. These changes were due partly to the influence of western life styles and tastes and partly due to an increase in the cost of building material, and breaking up of the traditional joint family system.

Even with the roof a variety of styles have occurred. The traditional rectangular plans with courtyard are no longer considered important and in its place, irregular shaped buildings have appeared.

Labourer's/fishermen's houses The houses of the labourers as well as those of lower castes used to be and still continue to be straightforward solutions to shelter problem, a sloped roof over a rectangular building. They are also, however, independent to each other with lots of space around and they are

mostly fenced in The only difference between poor, upper castes and lower castes was that the latter normally had their *kud is* in some other landlord's land and the former at least owned the land where they had their houses The inner courtyards are rare in lower class houses

The building itself is rectangular and is usually single roomed or two roomed with both serving as multipurpose rooms for living sleeping cooking and storage The construction is usually of mud laterite and unburnt bricks, or even with cadjan leaves reeds and grass. In the instance of the former, there may be a low basement and foundation, but in the latter both these are dispensed with or replaced by a raised platform (plinth) of mud or earth The floor is of clay, spread on the raised platform and levelled by beating. The walls of buildings which are not constructed of brick are usually of plaited cadjan leaves, fixed between six or more pillars of wood or bamboo which form the main structural members of the walls

The roof is supported by the walls (in the case of brick construction) or by the wooden/bamboo pillars (in the case of cadjan walls) The roofing material is usually of cadjan leaves though some brick or mud or laterite buildings have tiled roofs. Concrete roofs are non existent in this category The sanitary facilities, if any are usually detached from the building The latrine is usually a cadjan enclosure with a pit type latrine, situated away from the house In the absence of latrines open air defecation is usually resorted to in neighbouring vacant areas The bathroom is usually also a cadjan enclosure situated near the well Both the latrine and bathroom are enclosures devoid of roofs However the bathroom may be dispensed with altogether if a community tank hydrant or well is within the vicinity of the dwelling

Covenient lean to s of thatch and cadjan are added wherever possible, and used for storing implements, rearing poultry etc The lean to s as well as the main dwelling unit are often characterised by low roofs providing minimum headroom for the occupants

Tribal Houses

The tribal communities in Kerala are usually restricted to

the forested areas in the high lands and display a unique character The dwelling units are in the form of primitive huts and are usually agglomerations or nucleated clusters, around a ' square ' and surrounded by an enclosing thorn fence Isolated dwelling units are either located on stilts or on treetops

The materials used in construction are generally of bamboo or other jungle wood, though huts of clay and unburnt bricks are also seen among certain tribes Huts are either rectangular or circular in plan and seldom have more than one multi-purpose room for cooking, eating and sleeping The roofs are steeply sloped and are constructed with jungle wood or bamboo and thatched over with straw In most cases the roofs are very low with very low headroom at the only accessway/doorway This is necessitated by the incidence of heavy showers and high winds

Ventilation and access are restricted to a single doorway The house of the Kuruman Hill tribe is constructed on a stepped earthen basement which has a height of 3 to 5 feet and is decorated with designs

The walls are of clay or unburnt brick The roof, constructed with jungle wood and bamboo, and thatched with straw, slants rather low so that the sky can hardly be seen from inside The low roof is supported on slanting pillars Each house has only one room for all purposes including cooking and sleeping Some houses may have a side room improvised on one side of the main building, under the same roof, to serve as a seclusion shed The upper half of the walls is coated smoothly with red soil, while the lower half is plastered with a mixture of cowdung and charcoal A cellar in the basement, with an opening to one side is constructed for keeping poultry

Houses of other tribals constructed on tree tops and stilts have walls made of bamboo beaten to form a mat, or plaited leaves grass, etc The roof is also made of similar light, but highly inflammable material.

Modern House of Upper Classes

The traditional house has undergone innumerable changes in almost all respects—of form, orientation size etc The prime

considerations that have influenced the design are shortage of space and limited finance Areas such as the inner courtyard, flanking verandahs, tanks, elaborate gatehouse etc, are considered obsolete The house which is considered 'modern', is characterised by cement and concrete, with a flat roof, and a compactness of construction Rooms are generally so positioned as to provide direct and easy access, as well as economy of space. Verandahs connecting rooms, inner courtyards etc. are dispensed with for effecting savings

Lighting and ventilation are provided by means of doors, windows and ventilators Unlike as in the traditional house, windows never open into rooms, this being considered as an obstruction to circulation These houses also tend to have large doors and windows Doors are generally located at corners as a pre-requisite for proper circulation, unlike in the traditional house, where doors were in the centre of the walls

Roofs may be flat or sloping But attics are dispensed with Provision is made, in houses of higher income groups, for electrical gadgets to regulate the room temperature, these artificial means compensate for such features as the triangular air column provided in the traditional house, and the large air space below the ceilings These houses are characterised by lower roofs due to the high cost of construction

The trend in flooring is also towards marble or mosaic floors, which serve the same purpose as the black cement of earlier times, but these materials have now become a status symbol

The common building materials used in these structures are cement and steel With a depletion in the source of wood, as well as the high costs involved for joining elaborate wood work for joinery has been reduced and *concrete* has taken its place Glass, iron, steel and other versatile materials are extensively used In other cases, easily and cheaply available materials like stone or brick (burnt or unburnt) are used

The most important factor influencing the construction is the high costs involved Sizes of both plot and house have been reduced, and tanks, outhouses etc have been dispensed with The differences between the dwellings of castes have vanished Now it is the class one belongs to that dictates the size and form of the house Not many changes have, however, occurred

in the housing pattern of the lower classes They still build with mud, thatches cadjan or sundried brick The traditional neatness and distinctiveness are disappearing, as traditional values attached to houses are disappearing in the face of other more pressing economic problems The number of huts with cadjan or thatched roofs and with unplastered mud walls has also increased

Table 4 1 Distribution of houses by predominant material of wall in Kerala—1970

Material of wall	Rural	Urban
	No of Houses per 1000 surveyed	
1 Grass, leaves reeds or bamboo	128	99
2 Mud	193	117
3 Unburnt brick	203	54
4 Wood	44	168
5 Burnt brick	60	1
6 O I Sheets or metal sheets	1	1
7 Stone	360	484
8 Cement concrete	1	1
9 All other material and materials not stated	5	5

Source Census of India 1971 , Series 9, Part IV

Table 4 2 Distribution of houses by predominant material of roof in Kerala—1970

Type of roof material	% Rural	% Urban
1 Grass leaves reeds thatch wood or bamboo	37 6	57 1
2 Tiles slate shingle	59 5	35 7
3 Corrugated iron, zinc or other metal sheet	06	06
4 Asbestos cement sheet	07	09
5 Concrete-RBC/RC	09	48

Source Census of India, 1971 , Series 9, Part IV

Some Current Trends

Compared to other parts of rural India, Kerala's human settlement situation is better in terms of shelter and basic facilities. The production of shelter has been lower than the population growth, but not very low. When rural population grew by 24 per cent the building production increased by 20 per cent. In terms of building materials, roof materials and structural condition the position is not very bad. More than 60 per cent of the houses have fairly durable walls of bricks, sundried bricks, or cut stone. A similar per cent has durable roofs. Taken together about 50 per cent of the houses are considered *pucca* in Kerala (See Tables 4 1 and 4 2)

It is noticed, however, that there has been a significant decline in the production of houses in the immediate past. This drop in production, particularly in urban areas, is attributed to shortage of finance. House construction and land acquisition for house construction are the largest single capital investment of a family/household budget. The price of land has multiplied ten times during the past 20 years and the continuous fragmentation of urban as well as rural plots and their sale has led to a shortage of convenient plots, close to work centres in the urban areas. The prohibitive cost of land, therefore, is one chief constraint to house construction.

The traditional values of cleanliness, privacy and independence and even self protection of the Keralite have influenced the evolution of a pattern of shelter and of settlements which was most suited to the environment. The high pitched roof was a necessity dictated by the torrential rain and the availability in plenty of wood. Timber made the evolution of the pitched roof easier. Similarly, there evolved cultural solutions to many environmental problems like ventilation, relation with nature, coping with rugged topography etc. The cultural practices were perpetuated through a well laid down system of vernacular architecture and craftsmanship which were given religious sanction.

Now the values are slowly changing and the modern industrialised building systems from the advanced technologies are making their impact. The sloped roof is slowly vanishing. Use of concrete and other wasteful tendencies are making the

impact in such a way that these productions are neither artistic nor functional nor environmentally suited. Economic backwardness is however acting as a barrier in the adaption of modern techniques, which may perhaps be considered as a blessing in disguise. By and large local materials are used and a large percentage of houses are built of renewable materials like thatch. This type of construction has less of an impact on the environment than new materials like concrete. But they do have other problems from the point of safety and protection from rain.

The scattered settlement pattern and higher density have greater advantages with respect to the accessibility to services including specialised services. Most of the rural areas are better served with services such as hospitals, educational institutions and shopping facilities within easy reach compared to their counterparts elsewhere in the country. Moreover, the settlement systems consisting of homesteads, rural urban knots, service towns, towns and cities are well knit which makes innovations and developments easy to trickle down to all areas more or less evenly.

Yet there are several environmental problems connected with scattered development and homestead patterns.

The first is that of physical access. Apart from urban houses, most of the rural housesteads do not have a proper access. In the undulating topography, people have to walk through meandering footpaths to reach their homes. They have to take cattle and other agricultural implements also along these footpaths. No doubt, most of the homesteads are a 15 to 20 minute walk from a motorable road now. Yet the burden of providing access to multitudes of rural areas sprawling all over the region proves economically heavier. It has been noted that many of the rural elite now move towards the motorable roads constructing concrete block houses ruining the entire atmosphere of an otherwise serene rural living. It is impossible to think that any programme at any time can connect all the rural homesteads with a motorable road. If we do so, the total road area may eat up more than fifty per cent of the total area of the State. This phenomenon however through private access roads, is threatening.

Secondly, the urban areas of Kerala are, no doubt,

agglomerations of homesteads, and extreme examples of uneconomical use of land. Compared to any city in any other part of the world, Kerala's urban areas utilize most of its land for residential purposes. This is mainly because of the Keralite's preference to live in homesteads even when he is in an urban area. This has led to very low density uneconomic development. The problem become severe in the outlying areas where urban amenities like water and sewerage have to be extended.

The third problem is that of converting agricultural lands to residential use and subdivision of plots. The population multiplies itself in abnormal proportions, with a higher rate of females, making more new families requiring new houses. Lands are subdivided and new houses are constructed. Each new house, especially constructed with the help of modern technology of brick and concrete will necessitate the felling of at least three to four coconut trees. It is also not uncommon to see that paddy fields are also converted into residential areas. Where will this process lead to? The original homesteads of Kerala had their own advantage of being in the centre of an agricultural piece of land or coconut grove. But the subdivisions making the plots smaller and smaller leave no scaled room for agricultural purposes around. Thus with the increase in the number of homesteads, the net area for agriculture is being substantially reduced. It is evident that if this process continues, the green patch, that was once Kerala, will be converted into a forest of brick and concrete roofs and concrete blocks. This is especially so along the highways. The problem is severe considering that Kerala is a food deficit state. An ecological crisis and an environmental imbalance which are likely to threaten the very existence of life, is in the offing.

There is the fourth problem of ribbon development. Most roads and highways in Kerala are narrow and winding. With the increase in traffic on these roads their widths and alignments have become deficient. But now most of these roads have continuous stretches of buildings—residential and non residential. It is very difficult to find more than half a kilometer at a stretch of even National Highway which is free from ribbon development. Even bypasses planned to avoid population concentration face a similar fate. With very high rural urban interaction traffic increases on all roads, so does the ribbon development.

These problems which Kerala faces are unique. They require a unique and innovative approach

JAGANNATHPRASAD AN ORIYA VILLAGE*

The Region

There are only 26 important villages in Orissa with a population of over 5,000 and they are conspicuously absent in the central tract running north east to south west covering the largest part of the Orissa region. These villages make hardly 0·06 per cent of the total settlements accommodating about 0·80 per cent of the total rural population of Orissa. They, naturally, do not represent typical rural settlements of the Orissa region. The second category of villages with a population of 2 000—4 999 constitute also an insignificant percentage with only about 1·77 per cent of the total number of villages and containing about 11 per cent of the total village population. They are concentrated in the eastern and western sectors of the Orissa region, while the central tract possesses only a handful of them. The villages, however, are in no way different from the small sized villages of the State in so far as the rural characteristic of houses, living conditions and life style are concerned. Orissa is characterised by settlements of small size. About 72 per cent of the settlements containing 34 per cent of the rural population, have a population of less than 500. Settlements of the size 500—1999 make up at least 26 per cent of the rural settlements, accommodating as much as 54 per cent of the rural population of the Orissa region. Hence any attempt to select a village typical of Orissa leads a surveyor to choose one from this group of villages

The Village

Jagannathprasad is such a village situated at a distance of about 20 km from Bhubaneswar, the capital of Orissa. Bhubaneswar as an administrative town of Orissa perhaps had

hardly any trickling down effect on the rural settlements in the surrounding region. Till to-day Jagannathprasad stands out as a typical rural settlement of the Orissa region with a *population* of 1190 in 1971 It has 114 occupied residential houses with double the number of households living in it

Jagannathprasad is characterised by an undulating plateau topography with laterite soil and the occasional appearance of clayey loam The residential area of the village itself is located on a relatively higher ground The low lying areas are used for agriculture and these are mostly composed of decomposed residual soil and clayey loam The climate of the village is almost the same as that of Bhubaneswar with relatively pleasant evenings and very warm days in summer In winter the temperature falls appreciably The village is situated in the monsoon region and experiences a distinct winter dry period which leads to a subsequent water scarcity period from March to mid June It has in its proximity an extensive forest tract which, however, has been cleared to a large extent by villagers for fuel and cultivation

Out of a total population of 1190, about 33 per cent are workers Cultivators alone account for about 20 per cent of the labour when agricultural labourers are less than 5 per cent. The rest of the workers are engaged in trade, commerce and other services with only 2 per cent engaged in manufacturing including household industry This break up of the working force, in fact, does not give a real picture of the occupational structure of the people since the majority of the farmers do not get food from their land for a whole year Hence a number of them work as daily wage earners at least for 3 months in a year in other areas

The Internal Structure

The settled area is characterised by spatial grouping of houses on a caste basis. Each locality dominated by a group is known as *Sahi* These *Sahis* are: (1) *Gada Sahi* (The nucleus of the village) where the village aristocrats belonging to the *Khandayats* (Warrior-cum-cultivator) *Brahmins* and *Karans* live, (2) *Satghana Sahi* exclusively occupied by *Khandayats*, (3) *Padhan Sahi*, also dominated by *Khandayats*, (4) *Patana Sahi*

Fig 9
Location of Jagannathprasad Village in Bhubaneswar Tahsil, District Puri Orissa
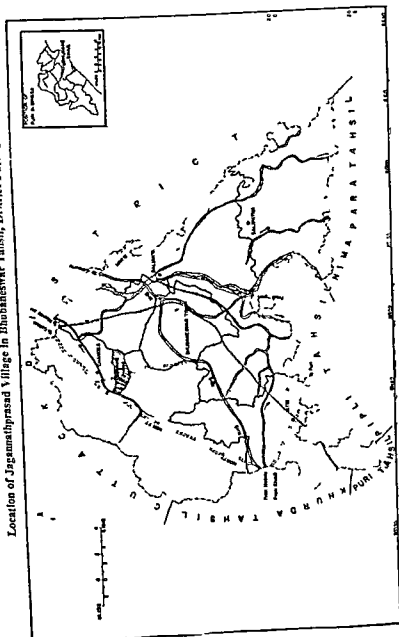
inhabited by a mixture of all communities, and (5) Tala Sahi or the lower enclave where people of economically backward classes such as, carpenters, washermen etc, reside

Besides the above Sahis, there are also a few enclaves in the village belonging to the Scheduled Castes These enclaves are the Bauri Sahi, Hadi Sahi and Sabara Sahi

Within the sahis the houses are laid out more or less in compact areas forming hamlets Very often the houses are arranged in rows on the two sides of a village road or along one or more lanes Some houses are clustered around certain central points, often a place of worship or of a distinguished family having an ancient tradition, etc This cluster would make that particular hamlet At a considerable distance from it, often with fields and tanks, etc, in between, there would be another hamlet or sahi

Shelter and Environment

Out of the 114 occupied residential houses of Jagannath prasad, 28 houses were surveyed for this study There were 66 households residing in these 28 houses, with more than two households per residential house on an average There are cases of houses having three to four families under one roof and at least in one of the sample houses, there were 6 households bundled up in one structure The pressure of population per house is as high as 10 on an average But, in certain areas, particularly in Gada Sahi, this pressure is at times 11 or 12 per house

Space is so inadequate that as many as 44 out of the 66 households have no separate kitchen (see Table 4 3), not to

Table 4 3 Kitchen facility in Jagannathprasad

Locality	No of surveyed households	No of kitchens
Talasahi	20	8
Padhansahi	7	4
Gadasahi	33	10
Dhobasahi	6	0
Total	66	22

speak of an additional room The same room serves for all purposes

Ninety per cent of the houses are made of su h building materials as bamboo mud laterite slabs, reeds and thatched with hay grass or straw The economic condition of the residents is so bad that in most cases they are unable to mend their houses for years In contrast to the urban houses the houses here are row houses and any single occasion of a break-out of fire in a single household would create havoc for the entire village The exist ing housing condition in this village is also influenced by the cultural and economic forces People generally prefer to live together in a joint family, and even when families become large new families do not form and move out They prefer to divide the rooms of the same houses as per the number of brothers of the family, thereby being bundled up within the same space in spite of the increase in numbers Separation is considered socially undesirable and building new houses is economically unfeasible Hence, a majority of the houses in this village, as elsewhere in Orissa are terribly overcrowded. The condition of the houses is so bad that many of them have outlived their age

There are only 3 houses out of the 28 surveyed houses which are less than 10 years old As many as 18 out of the 28 houses are more than 50 years old and 11 houses have surpassed 100 years of age Only 35 per cent of the surveyed houses are in a tolerably good condition The condition of the houses is so bad that except for a couple of comparatively good ones none of them can be considered safe for residence unless thorough repairs are made Most of them are dilap dated Table 4 4 shows the condition of shelters

Though the warm summer of Orissa requires good ventila tion most of the houses have no windows at all For a total of 66 households surveyed accommodating 275 persons in 147 rooms there are only 52 windows most of them being very small in size practically described in Orissa as *Gabaksha* (the eye of a cow) There are at least 30 per cent of surveyed rooms which have no windows at all while the average figure comes out to be one window per each 2 7 rooms Only about 20 per cent of the surveyed rooms are reported to have 2 windows each The idea of ventilation seems to have been unheard of by the resi-

Table 4.4 Number of rooms/household structural condition and age of the houses in Japannathprasad

Locality	House	Total Household	Household with one room		Household with two rooms		Household with three rooms		Household with more than 4 rooms		Bungalow		Mud with thatched		Hut		0–10		11–20		21–50		51–100		More than 100	
			No.	In%	No.	In%	No.	In%	No.	In%	No.	In%	No.	In%	No.	In%	No.	In%	No.	In%	No.	In%	No.	In%	No.	In%
Dhobasahi	1	6	6	100	—	—	—	—	—	—	—	—	1	100	—	—	1	100	—	—	—	—	—	—	—	—
Telasahi	9	20	17	51	2	35	1	7	1	15	3	15	9	9	1	15	1	1	1	1	2	2	4	4	2	22
Prathamathi	4	7	3	42	7	42	3	28	1	28	2	50	2	50	—	—	—	—	1	13	2	25	2	21	3	75
Qadisahi	14	33	11	33	42	28	42	23	—	2	14	14	2	84	—	—	13	—	—	—	23	21	3	21	6	42
Total	23	66	11	33	4	12	3	2	14	42	4	12	—	—	—	—	3	—	—	—	7	—	7	—	11	—

dents Their reaction is that windows and other holes affect the safety of the house which is partly true as most of the houses are of mud and similar material

Water supply is a greater problem The main sources of water are wells shared by a number of families About 40 per cent of the surveyed households have to go out to the village well on the outskirts for fetching water There are 10 wells in the 28 surveyed houses and 7 of them have now been abandoned to dump garbage There is a great scarcity of water particularly in summer Bullock carts loaded with drums go out of the village to fetch water from a tank at a distance of 2 km This is the main source of water both for washing and drinking in summer The wells and the tank are not free from filth, wash water enters the tank as well as some of the wells

Sanitation is almost unknown Only two houses among the 28 surveyed ones have a latrine Others use the open fields Garbage is usually thrown on the street to accumulate and putrefy there Dung urine and stagnating dirty water (in the absence of drains) provide the environmental setting for the village Shelter in most cases is shared by both human beings and cattle. Entrances to the houses are partly used as cowsheds, with holes made on the floor to drain out the urine of the cattle to the street Cowdung is scattered all over

Access to commercial and social services is difficult physically, as well as socially and economically. Three shops cater to the daily needs and the villagers have no complaints as they have nothing to buy For any major purchase they have to go to Bhubaneswar 24 km away However, there are some villagers who go there daily for work

Medical facilities are not available at least within a distance of 4 km The Chandaka dispensary is situated at a distance of more than 4 km where the villagers go for treatment for major illness For any serious case, they have to go to the hospital in Bhubaneswar—a distance of 20 km by road They go to the hospital or dispensary only in case of emergency, not otherwise

There is only a primary school in the village and that too is not attended by the children of many households Only sixty per cent of the children of school going age go to the primary school very irregularly The education of children is not a

concern at all for more than 75 per cent They look upon their children as additional bread earners as potential boy servants of some *babus* in Bhubaneswar Accordingly, it is unwise to spend money on books and education and also beyond their capacity Survival, which means getting something to fill the stomach is the primary botheration and hence the question of social and cultural amenities do not have any priority at all However, they seem to be very politically conscious and describe their lot partly due to the exploitation by the urbanites and partly due to their bad luck

TAKI LALUNG   AN ADI TRIBAL VILLAGE IN ARUNACHAL PRADESH*

Taki Lalung lies at a distance of about 12 km south west of Pasighat which is the most important urban centre in the Siang district in Arunachal Pradesh. This tribal village is very remotely located on the foot hills of the Besang Range. The nearest rail head is Morkong Salek which is about 40 km from Pasighat by a motorable but floodable road

The name Taki Lalung comes from two tribal settlements Taki and Lalung These two settlements represent two *different* clans of the *Adi* tribes of the Siang. Earlier these two villages were situated somewhere on the upper parts on the Besang Range but after the earthquake of 1950, the people of many tribal settlements came down and settled in newly constructed villages in the foot hill regions. The people of Taki and Lalung were persuaded by the government to settle at the present site with subsidy from the development authorities of the Siang district Even today Taki Lalung though considered a single tribal village, has two different tribal assembly halls meant for their public meetings merry making and for common worship These halls are known as *Moshups* and now there are two *Moshups* in Taki Lalung each holding function of the respective clan Taki and Lalung

The total population of Taki Lalung in 1971 was 283 which

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* This study was conducted by D K Singh Reader Post graduate Department of Geography Utkal University Bhubaneswar for Institute of Development Studies Mysore.

includes 148 males and 135 females There are 56 houses, and 56 families Most of the people in the village are illiterate 241 persons, out of the 283 persons did not even know how to write their names The village has a primary school But, only 31 boys and girls attend the school Adult males and females, go out daily for hunting or gathering food from the nearby forest leaving their children to look after the house and also to take care of the small babies Two boys from Taki Lalung are studying in the Higher Secondary School at Pasighat

The Economy

The economic condition of the tribals in Taki Lalung or elsewhere in any other tribal village nearby is indeed pitiable They live 'a hand to mouth' existence and there are days or occasions when they hardly get any thing to eat But their poverty is kept to themselves and they do not complain This is the usual and typical philosophy of tribal living in this area One will also never find any distinction between the house of a poor and that of a comparatively rich family, not only in this village but also in other settlements

Agriculture is slowly developing as a primary occupation while hunting and food gathering continue as subsidiary occupations Except for cultivation, hunting and food gathering, and also weaving to some extent, there is hardly any other occupation in which they engage themselves. A shifting method of cultivation or *jh m* cultivation is generally practiced In this *jhumming* practice, the slope of a hill is cleared up and the scrub and trees are burnt down within the area which is then exposed to the rains before the ground is ploughed by the tribals for growing food crops They cultivate one such patch of land for 2 or 3 years and then shift to another plot and continue changing into different plots before returning to the first plot This process causes soil erosion and the area faces loss of fertility besides being exposed to the gullying activities of the streams, harmful to the land and the people As a result, the Government is now trying to persuade these tribals to practise sedentary cultivation in the low lying areas which are however, a little away from their residential plots The tribals of Taki Lalung

have shown some response to this and quite a few of them have
accepted sedentary cultivation

The people of the entire village seem to be living together
with mutual love and affection Land is collectively owned and
there is no boundary line between the property of one family
and another but it is understood that the government has
already started demarcating land for cultivation in favour of
each tribal family, thereby introducing the idea of individual
landed property Such a demarcation would soon force them to
divide themselves into the classes of the poor and the rich which
they usually do not distinguish at the moment

Shelter

Each family in Taki Lalung has residential quarters and a
separate granary or storehouse for preserving food grains This
storehouse is usually away from the residential quarters so as to
safeguard the granaries from possible fire in the house All the
houses in the village are constructed and repaired by the
villagers themselves helping each other, and are fenced in by
bamboo The roofs are thatched with palm leaves collected
from nearby areas and also with paddy straw The building
materials used by the people in this tribal village are crude
gifts of nature growing in abundance in the nearby jungles and
groves Bamboo crude wooden planks cane, palm leaf and
paddy straw etc , are the common raw materials

All the houses have a similar appearance and are raised on
wooden poles Every house in Taki Lalung has just one room
and no more It is a big hall which projects into the open
platform at the entrance This open verandah serves as the
space for receiving visitors and even small friendly gatherings
The entrance to the house is only through this open platform
which can be reached by a bamboo or wooden ladder The
entrance doors are very small and one has to bend low to enter
the main hall of the house

The interior of all the houses is likewise similar The floor
is made of crude wooden planks and flattened bamboo The
hearth is in the middle of the house measuring about 3 x 4 ft
Earth filled in a wooden tray is supported on the floor and
over this, stones are placed to serve as a tripod for placing the

cooking vessels Sometimes there are two or three ovens running in a line according to the size of the family On the sides of the fire-places mats are spread leaving free passage for safety Utensils are usually seen lying on all sides of the hearth, scattered here and there. Wooden trays are hung from the roof over the fire place for drying fire-wood and grain Cane baskets, bamboo chutes, tubes, hollowed bottle gourd etc., are hung on the wall inside or on the loft over the fire place All this making a complete disarray of things Owing to the constant smoke inside the house and lack of ventilation, the ceilings have all become black

Taki Lalung has an innovative style of toilets attached to each house The houses are on stilts and a projection runs along the side wall of the house which in fact serves as a continuous stretch of a compound where people squat Pigs are kept below this projection in a pit which eat up the faeces dropping from above Though the pigs consume the same immediately, most of these pig sty-cum-latrines are found spreading foul smell and are unhygienic

Ingenuity and innovation, though of a very naive nature, is the hallmark of tribal life as exemplified in this study Any attempt to improve their habitat without reckoning their life style and the ingenuities is bound to be a failure

Summing Up

What we have attempted in this chapter is to present the variety of rural habitat conditions in different parts of India The variety is endless and we have had a glimpse of only a few

The housing condition in the rural areas might be said to be comparatively better than that of urban areas at least in two respects Firstly a quantitative shortage is minimal Everybody has a roof over his head Secondly, density is lower in most cases The quality of the dwellings also is not too bad as compared to urban areas It is true that the number of modern pucca structures are legion, but the local technology is simpler and it helps the production and maintenance at lower costs Even in tribal areas individual shelters are better maintained and suit the local requirements and resources What could be considered a major problem regarding shelter produc-

tion in rural areas is that relating to landless labourer and artisans and small farmers The resources are too small to match the needs

Even when individual shelters are comparatively better than urban slums, the environmental condition of many rural parts are as bad as slums It is visible in more dense and large rural *settlements* Water supply and sanitation are the areas *where* public agencies could do a lot more Rural occupations and practices like keeping cows and cattle *within the houses, the* culture of living with filth, and indifference towards common places and public property are responsible for most of the filth and squalor Many of these practices are absent in Kerala and even with a poverty higher than that of many other parts the rural settlements are commendably clean and hygienic here

Another major problem everywhere is the access to services, like schools, hospitals, clinics, post offices, credit facilities, shopping facilities etc. The peculiar settlement pattern puts Kerala in a comparatively better position in this regard also But, in other rural tracts the style of functioning, the design and the structure of social and economic services keep away most of the weaker sections of the society from any effective utilization even if they are physically near In most rural areas other than Kerala however, the location of such services is also far away from most of the rural population.

Much of these rural problems stem from poverty and also from the hierarchical stratified structure of Indian society But, the policies and programmes also have continuously neglected the rural habitat for quite a long time

SECTION B

THE RESPONSES

5

Human Settlement Policies and Strategies

The Dilemma

A SETTLEMENT policy, for that matter the policy of development in India faces many serious dilemmas as noted earlier It faces more dilemmas now than about five years ago The fundamental bias comes up in many forms Almost 80 per cent of India's population lives in villages, hence rural development is important and this should be the main emphasis *But* urban centres, especially the large cities play a crucial role in the economy and culture of even the rural areas, *ergo*, urbanisation should be encouraged and urban centres should get more attention This has been the actual, if not stated policy of the government

Time and again, the political rhetoric goes in favour of ruralites, as without their support no party can come to power But the bureaucracy in India, by and large, frown on this idea and in actual practice the elected leaders also have to satisfy the urban interests more than the rural as the former are more organised, vociferous and even economically powerful This does not mean that all the people who reside in urban areas are richer and all those in the rural areas are poorer Interpersonal disparity in urban areas is certainly higher than that in the rural as we have seen But there is a built-in mechanism in the present social economic structure in India which continues to exploit rural labour for the benefit of the urban bourgeois class which is reflected in the flight of capital and population to urban centres especially metropolitan cities

In a deeper analysis, the rural urban dichotomy in the development policy in India is essentially based on the conflicts of interest between the urban elite and the average man It appears as dilemmas—to favour agriculture which feeds or industries which grow—to dilute investment in a vast ocean of humanity (who are generally mute) or in the 'cream of India' in the few urban areas—to build innumerable huts which is less impressive or to build a few fabulous show pieces—to decentralize which may bring about the innate conflicts in Indian culture or to centralize (and find it difficult to manage)—to follow the pattern of the past and move towards chaos or to initiate revolutionary transformation and be lost And more fundamentally how to bridge the gap between the poor and the rich whether they are in urban or rural areas ? India's planners, its intelligentsia, its bureaucracy and its politicians are yet to solve this dilemma The following study on the settlement policy in India should be understood in this context

POSITION TILL 1974*

Neither before nor after Vancouver, has India announced a comprehensive human settlement policy Nor has its governments explicitly stated its intentions in this regard A few truncated attempts were made, but nothing has emerged yet In this context, the human settlements policy of India is to be found in policies which are related to it, such as the industrial policy/population policy as well as the general economic development policy Sundaram, in his book on Urban and Regional Planning has documented and analysed the different policy stresses in different plans and has concluded that much of what was happening was, in fact, truncated attempts at looking at different sectors of human settlement, such as housing, physical planning infrastructure etc [1] The spatial dimension of economic development was not looked into in detail

The policies of the government in the past have (by

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* 1974 is taken as a cut-off year for two reasons One the decision to hold a UN Conference on Human Settlements was concretized by this time and countries started preparations This marks the beginning of the International Habitat Movement Two 1975 saw a great deal of political change in India in the recent years

accident as well as by design) favoured and facilitated urban growth and metropolitanisation as mentioned earlier in this book. The stress on industry and the industrial licensing policy up to the later half of the sixties, clearly showed the metropolitan bias. During the late sixties and in the early seventies, some changes were brought about in the industrial policy. The Monopolies and Restrictive Trade Practices Act of 1969 and the revision of the industrial licensing policy in 1973, tried to bring in restrictions to big houses and encouraged small entrepreneurs and cooperatives in a bid to decentralise economic and industrial concentration. The joint sector idea was also confirmed by then. The policy of 1973 also tried to encourage the development of backward areas and industrial dispersion. The idea of regional planning and development through the growth centre also became accepted during this time. A number of rural industrialisation projects also were experimented with. However, there was no clear spatial policy for development of industries or for industrial location at the national or regional levels. All this has generated a spurt of new growth in intermediate towns, but the process could not gain momentum afterwards as expected. The reconstruction process is already visible.

The United Nations Conference on Human Environment held at Stockholm in 1972 made some impact on policy circles. Environmental aspects of planning and population control measures came to be augmented in the later programmes of the government. However, what seemed to be worrying the government in the later part of the sixties and during the early seventies were the great disparities between urban and rural areas as well as the interpersonal disparities. Economic power was also concentrating in a few hands. All this developed into new ugly shapes by 1974. A general unhappiness over the function and policies also was gripping the political and economic scene at this time. The oil crisis, inflation, the spiralling of prices, supplemented by the effects of political development in the subcontinent resulting in the birth of Bangladesh, and more than a million refugees crossing the border added fuel to the fire. A political uncertainty, lack of direction and policy indecision in all spheres became markedly visible. And what happened is recent history which ended in

the ill famed internal emergency declared by the then government in 1975

The Emergency Measures

No studies on policy changes in the recent past in India would be complete without a look at what happened during the emergency Politics and policies in India underwent changes during 1975 and '76 under the emergency Though the emergency has been much criticised for its negative impacts and ugly happenings, a lot of positive things also happened during that time All of a sudden, so to say, the weaker sections and rural sections of society started appearing boldly on the programmes of the government Many may dismiss this as pure political rhetoric, but the rhetoric came to be repeated so often that it created some conducive thinking in some quarters Several items of the twenty point programme of the then prime minister included very good and progressive measures such as *housing for rural areas, abolition of bonded labour, minimum wages for agricultural labour, socialisation of urban land,* etc

However, the execution, especially towards the end of the emergency, did not stick to the spirit of the programmes, whatever be the bureaucratic and political reasons The settlement development programme suddenly took a turn of a mere 'clean up' programme especially in some cities putting lots of people to difficulty For instance, programmes undertaken under emergency rule included *beautification* and *sanitization of the cities* The cities where these beautification programmes were sought to be carried out included Delhi and Bombay, indeed these were among the most controversial activities of the emergency period (along with imprisonment without trial of political opponents of the ruling group and the forced *sterilization* of males) In this programme, the slums, especially in Delhi, were demolished and the slum dwellers removed to 'make shift' colonies outside the main city limits Even some of the ancient dwellings in Delhi, such as those in Jama Masjid and Turkman Gate areas were demolished though these could not be considered slums and were certainly no encroachments on city land, but were traditional habita tions

In place of tenements and old dwellings, skyscrapers were planned Many of the latter were actually constructed and now dominate the Delhi landscape. The basic idea seems to have been that land in metropolitan areas such as Delhi was much too precious—in economic and business terms—to be wasted on small dwellings It seems to have been assumed that a city centre was not appropriate for residential purposes but should be used to provide business and office space only. Related to it was the idea that the cities should be 'clean' and orderly in the sense of consisting of straight, square buildings. As an English observer David Selbourne has put it (*The Hindu*, December 27 and 28) the dominant personalities of emergency rule were driven by the "desire to clean up India'

A few other things happened on the urban policy front during the emergency, which were in the right direction. An urban land policy to socialise urban land, for instance, was one which was a novel idea in India. We shall discuss this in a later chapter. Another attempt which was initiated during the emergency, as part of the preparation for the Habitat conference, was a national urbanisation policy resolution. This never took off the ground and has almost been shelved, perhaps as a punishment for being conceived during the emergency.

The National Urbanisation Policy Resolution

The idea of a UN Conference on Human Settlement in Vancouver, Canada held in 1976, popularly known as Habitat 76 unleashed a lot of energy in India at policy levels. The foremost among them was the preparation of a draft urbanisation policy resolution for governmental adoption. This was however, only a truncated form of a national settlement policy, one of the reasons why it was never adopted by the government. The thinking remained especially from India's urban oriented planners who still believe that all that is urban is good and urbanisation is a catalyst of development. They do not see urbanisation as a result of something else.

During 1975, the Government of India organised a seminar on urbanisation policy mainly to discuss the resolution docu ments prepared by the Town and Country Planning Organisation of the Government of India. The issues which prompted an

urbanisation policy was the gigantic agglomeration process revealed by the 1971 census and also the near breakdown situation experienced by many of India's metropolitan cities. Though the matter didn't proceed any further, many participants of the seminar pleaded for a more comprehensive settlement policy and not an urbanisation policy alone Mohan Dharia, then *Union Minister of State for Housing* who inaugurated the seminar also expressed this view

> In countries like ours, employment in large industry is bound to remain low for a long time to come *The small scale and cottage industries sector today contributes between 40 and 45 per cent of our total industrial production* This sector of light industry has to be recognised and established in any future pattern of our urbanisation What should be that basic pattern and what are the social and economic implications of that pattern are issues which you may discuss in this meeting and advise us
>
> In order to achieve such a pattern of urbanisation, rural and urban development will have to go hand in hand Programmes *of agricultural modernisation must continue, for the rural areas will have to continue to offer increased employment to the growing population by intensifying and diversifying the agricultural production including dairy, poultry, fisheries and agro based industries* [3]

He further hoped that rural development in the pattern outlined by him would stop the population exodus to urban areas, especially to metropolitan cities

The draft of a National Urbanisation Policy resolution *was discussed in the seminar to be recommended to government for adoption* Though this didn't happen, it became the base for the National Report for Habitat 76 The national report, however, did not spell out a national settlement policy but pointed out what would be the nature of such a policy None theless, both the National Urbanisation Policy Resolution (draft) and the national report were only a bureaucratic and technocratic exercise and have not received any serious political attention or governmental sanction

Though the policy gap still continues, it would not be out

of place to see what the national urbanisation policy resolution and the policy framework for Human Settlements outlined in the national report aim at

The national urbanisation policy (draft resolution) starts with the assumption that the country is moving towards greater urbanisation which is fundamentally good, but it has to be channelled into desirable directions It also pleaded for setting targets of urbanisation with time limits In other words, urbanisation was considered as one of the things which the country should strive to achieve. It was considered as a condition for development The argument for this is the familiar fallacy that urban dwellers are different in attitude towards development They are more educated, have more diversified occupations, more skills, view family planning more favourably and are more productive None of these assumptions is scientifically correct or empirically tested Another argument that all the developed countries are more urbanised is also baseless because the greater urbanisation in those countries is a result of socio economic and historical processes and not vice versa Urbanisation did not and never will lead development but often follows industrial growth The objectives of the policy were stated as

(a) working out and implementing a spatial pattern of economic development and location of a hierarchy of settlement,

(b) optimum distribution of population between rural and urban (what this optimum meant nobody knows),

(c) generating growth in medium and small size towns and new growth centres,

(d) arresting the growth of metropolitan cities and

(e) providing a minimum level of services in rural and urban areas, and reducing the level of living between urban and rural areas

The policy draft, however, saw urban and rural development complementary to each other and decentralised concentration through growth centres was the strategy it recommended It also stressed on a national minimum needs programme for rural as well as urban areas Nevertheless, the bias was for urban and the draft detailed strategies to improve

conditions in urban areas and thus rural development did not get adequate attention

TOWARDS A HUMAN SETTLEMENTS POLICY

The committee which prepared the national report for Habitat 76 consisted of officials as well as non-officials, professionals and non professionals, urban planners economists, scientists, specialists and generalists May be due to this heterogeneous composition of the committee, what emerged was a more broad based but philosophical and vague statement It also did not spell out a policy, and only stated that a policy was in the process of being evolved An approach to such a policy was stated and suggested that the policy framework should envisage a certain amount of autonomy in action to accommodate regional variation and provide flexibility for being adopted in varying situations

The following points were considered important to govern future actions

(a) human settlements represent society's cultural, technological as well as political aspirations The process of development should subserve human needs such as biological, social economic and environmental—without adversely affecting the ecological balance,

(b) human settlements, both rural and urban are centres of resource generation, distribution and consumption The symbiotic relationship between these types of settlements needs enhancement for ensuring a better quality of life for the people, and

(c) economic development has to be pursued without alienating people from their life style or nature from its recuperative qualities [3]

The report added that,

the present trends indicate that the process of urbanisation is irreversible To a large extent, it is a condition for and a consequence of rapid economic development and indus trialisation. It may be desirable to deal with the problems

of human settlements both urban and rural and their environmental requirements simultaneously It would require that programmes and policies for agricultural and rural development are well co ordinated with those for industrialisation and urbanisation ensuring balanced development in the holistic sense [4]

Desirable objectives for such an integrated planning approach were mentioned as follows

(a) minimisation of the existing differentials in the standard of living and services between rural and urban settlements to make each equally attractive from the social economic and environmental point of view;

(b) minimising of the process of migration by establishing better linkages between rural and urban areas and by developing service centres and growth centres to provide adequate distribution of goods and services

(c) correlating investment mechanism with environmental programmes to arrive at criteria for location of human settlements

(d) providing incentives for the development of the less privileged sections of the society and for the under-developed areas to provide greater economic opportunities and social justice, and

(e) identifying criteria for appropriate distribution of a large population in a scientific manner for optimum utilisation of existing resources

A reversal of priorities in the objectives to those of the draft resolution could already be seen though the objectives themselves were little changed The fundamental dilemma was not attempted to be resolved The planning strategy recommended to achieve these objectives included

(a) regionalisation of the development process at the national, regional and local levels consistent with the demographic and environmental goals

(b) linking of physical and investment planning and

(c) *improving the provision of shelter and services with special emphasis on the weaker sections*

A set of action areas were identified for different levels of action

National level   Population distribution policy   At the national level, the population distribution was considered as a lead policy which should provide guidelines for optimum utilisation of resources, energy generation and its use in relation to distribution mechanisms and transportation networks. It was also supposed to define areas of action at the regional/state level within which each state would be able to organise its actions. Considerations that should govern formulation of the Population Distribution Policy at the national level according to the report, include

(a) *resource policy* for optimum utilisation and conservation of natural and man made resources,

(b) *energy policy* for optimum utilisation of conventional as well as non-conventional energy sources which may be renewable or non renewable; and

(c) *co-ordinated policy for infrastructure* for optimising efficiency of the distribution system in conjunction with transportation and communication networks to provide equitable socio-economic benefits to the population

Regional level   Settlement location policy   At the regional or state level a policy framework for human settlement was envisaged to set out guidelines for the 'location of human settlements' in relation to the National Population Distribution Policy. It was also supposed to outline broad guidelines for locating economic activities, such as production centres marketing centres etc. based on the availability of resources and infrastructure. The policy framework at the state level, should therefore identify—(a) a mechanism for implementation of policies and special programmes (if any) (b) a concept of development with adequate flexibility for interaction, adaptability and adjustment (c) priority areas for immediate action—such as overcrowded cities, barren land etc, and (d) areas of inter lap where action by the centre is needed to subserve the

national interest The report added that such a framework would require organization of appropriate policies for action at the regional or state level which may include

(a) a policy for land,

(b) a co-ordinated policy for infrastructure,

(c) an integrated policy for services, and

(d) a policy for conservation of natural resources and for protection of air, water and land from pollution

It was not clear (may be even to the makers of the report) what was meant by settlement location Did they mean growth centres or something else?

Local level Structure plans Under the present system, action at the local level is taken at the block development level for rural settlements and at the municipal level for towns and cities However, it was felt important to organise the development of areas in between These areas, according to the report, could be developed as service centres or growth centres depending upon the policies adopted at the sub regional level or local level It was recommended that structure plans be prepared for rural as well as urban areas

Recommended specific actions at local level included

(a) *policy for shelter* including places of work living and for social services such as health and education

(b) *policy for infrastructure* including types of transportation and its routing road and rail networks energy grids and communication system

(c) *policy for services* including availability of hygienic water supply, drainage, sewerage waste disposal and its possible utilisation

(d) *policy for management* including streamlining and reinforce ing of the existing institutional framework and legislation for optimising the distribution of socio-economic benefits to an optimum number of people

(e) *policy for the protection of the environment* including con servation preservation and utilisation of areas of cultural heritage scenic beauty, environmental aesthetics and measures for pollution abatement and control [3]

*From the above outline of the policy framework given by
the country report, (for that matter, even the full report does
not make one wiser) it becomes clearer exactly how unclear
Indian planners and bureaucrats are when it comes to the
resolution of the basic dilemma Thinking is all at the philoso
phic levels and never comes down to earth When it comes to
policy, either it gets bogged down on details or becomes mere
wishful thinking*

AREA PLANNING AND STRESS ON SMALL TOWNS

The idea of regional planning and regional development
strategy based on growth centres became popular in the acade
mic as well as government circles in the early seventies Some
vigorous attempts were made to introduce these ideas into the
planning and policy making in India Attempts were also made to
identify macro meso and micro planning regions at the national
level Some states such as Tamil Nadu identified *smaller*
planning regions within the state and plans were actually
prepared for some regions

Regional planning on a country wide scale was never done
At the national level regional plans had been attempted only in
problem or special areas some of which spread over several
states The plan prepared by the Town and Country Planning
Organisation (after the Third Five Year Plan, 1961 66) for the
South-east Resource Region and the joint efforts of states and
central agencies in the planning of the Bundelkhand region in
central India the Western Ghats region in southern India and
the North-eastern Region in the north eastern part of the
country are examples None of these plans however went into
the question of human settlements in detail

Another set of experiments sponsored by the national
Government and undertaken by the states was the Area Deve
lopment Programmes These programmes have been attempted
from the Fourth Plan onwards These are based broadly on
integrated area development approach but emphasise different
sectors depending on the programme The emphasis on Tribal
Area Programmes differ from Hill Area Programmes or Drought
Prone Area Programmes Apart from these above mentioned
three, two more programmes were being pursued in the Fifth

Plan viz, Small Farmers Development and Marginal Farmers Development All these programmes were administered at the district level Nonetheless these programmes are also not attempts on regional development planning in the full sense and the human settlements content is minimal

However, regional planning and some area development programmes had been taking note of the human settlement dimension. The idea of growth centres in the rural areas to trigger off growth there was the major principle behind this A pilot project was run by the Government of India with the aid of the Ford Foundation to identify the growth centres in selected regions in each state. The project though successful in completing this exercise in some states, was not followed up And when these projects focussed on the methodological problems of identifying growth centres, serious criticisms were thrown up by academics and planners on the very approach to the growth centre strategy for regional development. The effectiveness of such centres to trigger off development in the backward rural regions was questioned theoretically and empirically. This also dampened the follow up in a way

All these programmes and the new concern on rural areas, as well as the growing weight of metropolitan cities, have, however, resulted in a new stress on small and intermediate cities. The argument in favour is very simple, that investment in and development of small and medium sized towns will reduce migration and consequently arrest the growth of very large towns on the one hand and provide opportunities for a desirable pattern of urbanisation on the other In 1975, the Ministry of Works and Housing of Government of India, appointed a Task Force to examine the planning and development of small and medium sized cities and towns [6] The Task Force submitted its report in early 1977 Though the terms of reference to the Task Force were primarily toe volve a strategy for physical planning development and management of the small and medium sized towns (towns with a maximum population size of 300 000) in India, the pattern of evolution of towns and cities since independence and policy implications at the national level were also studied

The report started with a note that "urbanisation is a process to be achieved through a system of human settle-

ment, it has to strengthen the economic capacity of each human settlement to provide sufficient margin for social development and to achieve a proper quality of life". Urbanisation was considered as a driving force rather than a consequent process. The report, nonetheless, stressed the interdependence of large towns, small towns and rural areas for a healthy growth. Decentralisation of population and industries and stress on agriculture was identified as the keys to the future. The small and medium sized cities were to be assigned a crucial active and positive role both in rural and metropolitan development. The national population policy should be supplemented by the national population distribution policy limited to a system of human settlements. The report also emphasized certain imperatives for the development of small towns, such as—(a) a national urban policy, (b) urban land policy, (c) development of organic linkages between cities and areas around, (d) identification of growth points, (e) location policies for regional development, (f) a green belt around settlements of a certain size, (g) formulation of workable norms and standards, and (h) creation of appropriate local government agencies at various levels.

The Task Force report did not contain anything in detail regarding these imperatives, except certain very generalised phraseology. Nor did it spell out any strategy of development of these towns in detail except the arguments for creation of urban management and physical planning agencies.

THE JANATA PHASE

In 1977, the government changed. The Janata Party which came to power, claimed to have inherited the legacy of Mahatma Gandhi and his economic policy. Their manifesto made a lot of promises including a reversal of past trends. Decentralisation was the catchword and 'rural was the bias. They started with a rather unconvincing premise that all that the previous government had done for the past 30 years was wrong. And they promised to undo all. Among the things the Janata Party promised in their election manifesto were included deletion of property as a fundamental right, a strategy of full employment, stress on Gandhian values of austerity, and a decentralised economy, the appropriate technology, narrowing

down of rural urban disparities, primacy to agriculture emphasis on wage goods formulation of a national water and a national energy policy, environmental care realistic public housing programmes and a social insurance scheme Many of these have far reaching implications for a future national settlement policy, but the case for a comprehensive human settlement policy seems to have been buried

Though the Janata Party has been in power (at the time of writing) only for a little more than a year much of their promises still remain to be initiated The new government has given its economic policy which is in tune with its manifesto in some aspects, but on certain aspects it is silent such as deletion of property rights Industrial decentralisation is being attempted and rural development and employment plans are being given more importance

The economic policy announced by the Janata Party in November 1977 states its ideological base

> Freedom and equality are as indispensable to man as the satisfaction of his material wants The Janata Party there fore is pledged to the building up of an economic system which will ensure the basic requirements of bread freedom and equality The Janata Party is of the view that there is need to develop an alternative both to capitalism and communism The party believes in treading the path of *Gandhian socialism based on political and economic decentralisation It believes in a society largely based on self-employment* The Janata Party is opposed to any economic system which allows individuals or groups freedom to exploit other at the same time it is not in favour of the state possessing unlimited power which will destroy all initiative and freedom   * (italics ours)

The policy gives primacy to agriculture and rural development, but at the same time it supports industrialisation as a measure to take away idle hands from the agricultural sector However, the love of the Janata Party is for an all scale and cottage industries and for decentralisation The economic policy added that

To prevent concentration of industries in a few large urban centres, the government should prohibit starting of new industries in urban centres with a population of 10 lakhs or more or in the environs of these centres within a radius of 15 or 20 km

The cottage industries programme and small scale sector are being revived as an effort to decentralise as well as to industrialise rural areas. The rural bias is clear George Fernandes, the Union Minister for Industries emphasised this change in focus in an interview given to a magazine.

For all practical purposes we were working under the constraints which we had inherited, though, when our budget was presented to Parliament in June, we did make certain basic shifts. For instance, for the first time in the history of our budgeting, Rs 50 crores was kept aside for providing drinking water to the rural areas . . . We began with *where exactly do we differ from the previous Government.* This is the starting point—*moving from the urban to the rural, which will help in removal of regional imbalances, which will help to take purchasing power into those areas where it has not gone.* We are shifting from the big to the small. Uptill now we spoke of the small scale and cottage industries—we only spoke about it. These industries were museum pieces, to be exhibited, to be talked about—'We also have a small scale sector, we also have handicrafts.' From 180 industries reserved for the small scale sector, it has now been increased in our new industrial policy to 500—plus. Now, over the years, people have been discussing the dispersal of industries, the need for going into the backward areas, and a lot of schemes were worked out. There was one simple way of doing it—by denying industrialists the licences to set up more industries in the cities. Now we have decided to do this. On this basis of the 1971 census, any town or city with five lakhs of people, will not get any more industrial licences. What is there is there, but there will be no future licensing. Besides, where the cities have more than one million people, even the surrounding areas will be denied fresh licences.[19]

The new government has also stated its intention to systematically decongest cities and improve them without destroying their natural aesthetic. It also promises to improve the living conditions in rural areas with more infrastructure, schools etc. To that extent the promise is to strengthen the minimum needs programme. About urban planning the Janata policy statement has this to say

> For thirty years we have neglected the urban environment allowing a haphazard growth of our cities and towns. It is therefore, essential that all metropolitan areas produce a regional plan which will scientifically disperse congestion of industry and people without destroying the natural aesthetic. Similarly, every city having a population of five lakhs or more must statutorily have a master plan and make provision for a green belt area around the city to prevent haphazard growth on its periphery. Likewise cities of one lakh and over must produce master plans which make adequate provision of open spaces and orderly development. In all these plans, provision should be made for slum improvement housing for the poor and the displaced slum dwellers and where possible allotment of house sites for them. In doing so care should be taken to ensure that they do not have to travel long distances to their places of employment

The Sixth Plan for the five year period of 1978 83 drawn up by the Janata Government shows a bias towards rural areas and agriculture. Agriculture, gets the highest priority and Integrated Rural Development Programmes are stressed. Cottage and Village industries are the pet items of Janata Government, at least in talk. Their development and spread is stated as one of the major objectives of the Plan. The Janata Government vows to achieve full employment in next ten years. For this purpose employment generating activities other than agriculture have to be pursued. Area Development Programmes and planning at lower levels such as block and district are being emphasised. However, the strategy for full employment through village industries and cottage industries is a doubtful proposition. The Plan also puts very high hopes

on the diversification of the rural economy through fishery
development, social forestry, dairy development, sheep and
wool development etc Even int he industrial development sec-
tor, the plan's policy is to encourage such technologies which
would generate more employment Certain types of industries
are now reserved for the small scale sector

On urban development the plan notes that

> Planned urbanisation is a necessary component of the infra-
> structure of economic development, *inter alia,* a variety of
> centralised services for the surrounding rural areas such as
> marketing of agricultural surpluses and products of village
> and cottage industries and supply to rural areas a variety of
> goods e g fertilizers, engineering products like pumps and
> pipes credit, manufactured essential commodities like
> bicycles, kerosene, soft coke, building materials and medi-
> cines and last but not the least specialist skills in a wide
> *variety of fields required for rural development* [11]

*This ideal set up of rural urban relation where urban
centres exist to serve the rural areas is a dream of the Janata
Plan makers It has very little to do with reality, however As
stated elsewhere the urban areas have more connections with
the Kulaks and landlords of the rural areas which only works
to strengthen the suction of rural surpluses upwards without
much inputs downwards in real terms Anyway, to achieve the
dream of ideal urbanisation, the Plan proposes the gist of an
urbanisation policy of the next decade which focusses on
small and medium towns It is also intended to slow down and
if possible reverse the rate of growth of metropolitan cities* [15]

Besides banning new industries, new commercial offices and
government offices in the already existing area and giving grants
for industries to shift from these places new industries are to
be lured to small and medium sized towns by developing an
infrastructure and communication facilities there Village and
cottage industries will be allowed only in villages and towns up
to a population of 25 000 Tiny industries have to be developed
at towns up to 50 000 population The plan also restricts the
flow of funds for infrastructure development in larger towns

CONFUSION

However, the Janata Government, for all its good intentions has created not a small confusion in the country. While preaching for 'small' in all sectors, it has been embarking on an unknown route of development, for which neither the Janata Government nor the bureaucracy has so far shown courage to go far beyond the deskwork Many symbolic things are being done such as attempts to make certain multinationals in the industrial sector, but there is no sign yet that the agglomeration process has started to decline and that the decentralisation process has begun One major drawback, a serious one, in the human settlement field is that while the Janata Government has initiated interest in the rural settlements and more and more people are joining the 'rural band wagon', there is no clear idea whatsoever, of the type of settlement structure the new policies are going to promote Moreover, the dichotomy is being accentuated by arguing that the urban and rural are very clear cut entities The people in both areas are not uniformly equal and, therefore, pushing this dichotomy to the end as it is being done is fighting the shadow The real problem is behind this facade The success of a strategy will depend on how well the exploitative relations between the labour and the poorer classes on the one hand, and the landlords, the capitalists and intermediaries on the other, are broken An idea about the whole is seriously lacking

In the context of the settlement policy, a new approach to development would mean upgrading rural life economically, socially and culturally in such a manner that the lure of cities is diminished radically. Improving the quality of life in the villages has a different dimension altogether, as the material for house construction as well as the skills would be locally available and, in any case, will not be as high in cost as cement, bricks, asbestos, etc used in even the cheapest urban resettlement projects Services such as sewage systems, motorised transportation which are a necessity in urban or peri urban settlements are generally not required in the rural areas In other words, the solution is resettlement of the villagers in the villages, in order to stop their uncontrolled migration to the cities which is what the new policy is aimed at

What is being talked about now is a reversal of the coin, from urban to rural The same mistake as before is repeated viz the emotional approach the glorification of the ruralite, the admiration of illiteracy and deification of the plough, (in the name of rural development, informal education and appropriate technology) and no one knows what this will entail At a more mundane level, will not the inadequacy of the administration, its urban and anti poor biases, its elitism, its lack of direction or policy, and its extreme weakness—the corruption—equally prevent a rural biased habitat or settlements policy? Now, the issue is, whether the political leaders have the strength and will, and rural India and the poor the mobilization and organisation power to counter the blocks?

Neither before, nor after Vancouver has India announced a comprehensive settlement policy Nor has she explicitly stated her intentions India's national policies related to human settlement issues, especially housing, may be summarised as "concerned", but completely inadequate Though the Government of India has not taken a central role in the international discussions on settlements, its representatives have participated in almost all international discussions By and large, therefore, India may be said to be well informed on all the issues in this area Unfortunately, there is virtually no awareness of the total "settlements" dimension in India today, even among the planners This is all the more surprising because the ethos of India, its basic philosophy, religious beliefs, and traditions, are ecological, relating organically to the physical and biological environment The intellectual poverty of planning in India may be related to the exclusion of the ethos by the educated classes

Similarly, almost all technological innovations and developments do become known in India, but are rarely put into operation on a large scale The very concept of "shelter" would have a different meaning in the Indian context than it does in those generally very cold countries from where the new ideas of settlements and shelters have developed Protection against the severity of weather, the necessity of insulating the body with heavy clothing and thick walls from the prevailing cold, the underlying concept of touch as a potential loss of energy—all these ideas and assumptions, which do not apply in most

parts of India, are nevertheless now accepted as basic for shelter Traditionally, Indians have been very lightly clothed, now the fashions demand heavy clothing Traditionally, housing has been open and airy, with minimum of walls, except for glass storage Now heavily cemented structures are being built Traditionally, settlements involved close interaction with natural elements, wind, sun and rain (the traditional picture is that of young and old basking in rainfall), with flora and fauna New settlements insulate men and women from nature and other forms of life As the distance between man and nature, man and animals, and between man and man grows, new intermediaries have to be developed—whether these are new social groups, systems of transportation and communication, or means of exchange New sources of energy have to be dis-covered to mobilise the apparatus that grows increasingly complex Demand continually outruns resources A funda-mental rethinking is needed, a re orientation In the nature of the case, this cannot arise in governmental circles, but must begin in groups or institutions that are freer, less obliged or committed to earlier thinking, positively or negatively.

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Policies on Land and Environment

LAND IS a major resource in an agricultural country like India it is also a source of almost all problems—social, economic, political and environmental The problems connected with land in India could be classified as follows

1. Problems arising from this simple, but importantly basic fact 'They ain't making it any more' Consequently, the pressure on land increases with different activities competing for space The problem dimensions are changing landuse, scarcity, environmental deterioration etc

2. The basic fact that land is limited projects another problem i e the struggle and competition for its possession This relates to ownership and holdings, with many colours and dimensions The question is that of the fundamental relation between man and land

However, this is only a simplistic statement The nature of these two basic problems is not the same in urban and rural areas or in different parts of the country Also it is too simplistic to assume that these two problems are independent of each other and can be dealt with separately They are in fact highly connected to one another In the ultimate analysis all the development efforts relate to land in one way or other, and therefore land as a natural resource requires more care and public intervention Moreover improper use and management of land constitute one of the major habitat problems in this country

In this chapter we would analyse the problems connected

with land and the policies related to rural and urban land with respect to the two major dimensions described earlier i e, the physical aspects and the social aspects

SCARCITY OF LAND AND COMPETING USES

The land man ratio has been decreasing steadily in India as a result of population increase Out of the 328 000,000 hectares of land in India, only about 40 per cent was available for culti vation during 1950 51 which increased by 5 per cent in twenty years to 45 per cent by 1971 72 As there is not much left to be added to this, the per capita availability of agricultural land will be diminishing quite fast So is the case with land under many other uses such as forests, pastures etc As the pressure increases, the natural tendency to reclaim land from other pur poses such as forest and convert to agricultural use may prove dangerous in the long run It is estimated that by a modest estimate India would require 426 8 million hectares of land (about 40 per cent larger than its geographical size) by A D 2000 The agricultural land requirement alone would be at least 255 million hectares against 137 million hectares now available

These statistics would give a crude idea about the scarcity of land in India This scarcity is severe in some parts of the country like Kerala (with a land man ratio of 0 12 hectares of cultivable land per person) and West Bengal (with 0 18 hectares) Some states have higher land man ratio s such as Madhya Pradesh (0 57 hectares) Maharashtra (0 60 hectares) Rajas than (0 66 hectares) but the productivity of land in these states is very low There are a few states, however, namely, Andhra Pradesh Haryana, Punjab Karnataka and Uttar Pradesh where pressure is comparatively low and productivity per hectare is comparatively high

The scarcity of land poses severe landuse and ecology problems Though the total area under forest has been increas ing it has been shrinking in some states and the quality of forests has also changed Areas under miscellaneous tree crops, groves etc have diminished to almost nothing The demand for non agricultural uses is increasing As no more sub stantial land can be reclaimed either from forest or waste lands, careful planning for landuse is necessary The accompanying

Table 6.1 Classification of area

(Area Thousand hectares)

		1950-51	1955-56	1960-61	1965-66	1970-71	1971-72*
1	Area under forest	40,482 (14.2)	51,343 (17.6)	54,052 (18.1)	61,583 (20.2)	65,978 (21.6)	65,757 (21.5)
2	Area not available for cultivation	47,517 (16.7)	48,396 (16.6)	60,751 (17.0)	49,506 (16.2)	45,363 (14.8)	45,757 (15.0)
	(i) Area under non agricultural use	9,358 (3.3)	13,920 (4.8)	14,840 (5.0)	15,170 (5.0)	16,218 (5.3)	16,419 (5.4)
	(ii) Barren and un culturable land	38,159 (13.4)	34,476 (11.8)	35,911 (12.0)	34,336 (11.2)	29,150 (9.5)	29,338 (9.6)
3	Other uncultivated land excluding fallow land	49,446 (17.4)	38,895 (13.3)	37,637 (12.6)	35,832 (11.7)	33,781 (11.1)	33,450 (10.9)
	(i) Permanent pastures and other grazing land	6,675 (2.3)	11,473 (3.9)	13,960 (4.7)	14,828 (4.9)	13,314 (4.4)	13,122 (4.3)
	(ii) Land under misc tree crops and groves not included area sown	19,828 (7.0)	5,885 (2.0)	4,459 (1.5)	4,038 (1.3)	4,366 (1.4)	4,369 (1.4)
	(iii) Culturable waste	22,943 (8.1)	21,537 (7.4)	19,212 (6.4)	16,966 (5.5)	16,101 (5.3)	15,949 (5.2)
4	Fallow lands	28,124 (9.9)	24,127 (8.3)	22,819 (7.7)	22,330 (7.3)	19,745 (6.5)	21,234 (7.0)
	(i) Fallow land other than current fallows	17,445 (6.1)	12,544 (4.3)	11,180 (3.8)	9,207 (3.0)	8,612 (2.8)	8,696 (2.9)

(ii) Current fallows	10,679 (3.8)	11,593 (4.0)	11,639 (3.9)	13,183 (4.3)	11,113 (3.7)	12,558 (4.1)
5 Net area sown	118,746 (41.8)	129,156 (44.2)	133,199 (44.6)	136,242 (44.6)	140,398 (46.0)	139,365 (45.6)
6 Total reporting area†	284,315 (100.0)	291,917 (100.0)	298,458 (100.0)	305,553 (100.0)	305,270 (100.0)	305,583 (100.0)
7 Area for which no return exists**	43,713 (13.3)	36,131 (11.0)	29,590 (9.0)	22,495 (6.9)	22,278 (6.9)	22,465 (6.8)
8 Total geographical area**				328,048		

*Provisional

†Due to change in coverage the figures are not comparable from year to year and excludes information on area under the unlawful occupation of China and Pakistan

**Supplied by Central Statistical Organisation according to Surveyor General of India.

Note—Figures in brackets indicate percentages to reporting area. In case of "Area for which no return exists" the percentages are to "Total Geographical Area".

Tables 6 1, 6 2, and 6 3, give the present and projected landuse pattern

Landuse within the human settlements is the most problematic The total area under human settlements in India was 1 2 per cent in 1961 which increased to 1 8 per cent in 1971 The present pattern of landuse in both urban and rural areas in India in most cases can be termed as grossly unsatisfactory, to use a mild word

A survey conducted by the Town and Country Planning Organisation on the landuse pattern of India's cities and towns reveals that 47 per cent of the developed land is under residential use, 13 per cent under roads and streets, 12 per cent under public and semipublic, and nearly 10 per cent under industry and commerce Only 4 per cent of the developed land consists of parks and playgrounds It is also revealed that most of the towns have large percentages of area left undeveloped In most medium and small towns more than 50 per cent of the valuable urban land lies vacant, which is put to no use, while the expanding cities encroach on agricultural land The landuse pattern in urban settlements has become largely irrational, with land being distributed unevenly between various uses Even those planned cities and towns have grown out of its rules haphazardly Most of these urban landuse problems relate to the pattern of ownership No reliable data is available, however, on this aspect The inadequate laws regarding land also add to this

Environmental conditions in rural settlements are no better with haphazard mixing of residential land and land for agricultural operations, animals and refuse However, there is some rationale in this mix as they have evolved out of the life style of rural areas There is no complete data regarding the landuse structure of rural settlements in different parts of the country and of different sizes

HOLDINGS AND TENURE

The traditional agrarian structure in India has developed along different lines in different parts of the country However, some common features can be found The structure is composed by and large of three groups, namely—landlords, tenants and

Table 6 2 : Total requirement of land in 2000

(million hectares)

Landuse category	Higher estimate	Lower estimate
Forest	98 4	98 4
Non-agricultural uses	57 4	51 6
Pastures and grazing land	23 9	21 6
Net sown area	282.5	255 2
Total land required	462.2	426 8

Table 6.3 : Desirable landuse pattern in 2000

(million hectares)

Landuse category	Higher estimate	Lower estimate
Agricultural land	138 8	138 8
Pastures and grazing lands	23.9	21 6
Forests	98 4	98 4
Land earmarked for non-agricultural purposes	57.4	51 8
Barren and non useable	9 5	17 4
Total geographical area	328 0	328 0

Table 6 4 : Landuse structure of urban settlements

PERCENTAGE OF DEVELOPED AREA TO TOTAL AREA OF TOWNS AND CITIES

City size	Average area (hectares)	Per cent developed area total area
1 million and above	11,692	74 0
500,000—999,999	10,271	53 9
200,000—499,999	3,964	69 0
100,000—199,999	2,811	56 9
50,000— 99,999	11,372	50 0
20,000— 49,999	847	50 4
Less than 20,000	853	23.5

Source : Govt. of India, TCPO, Land-use Pattern in Indian Cities and Towns, 1966 (mimeo)

labourers The landlords were of different types such as absentee landlords whose holdings were let out to tenants and the small landlords who were cultivators themselves or self-cultivators Thorner refers to this variety as below

> In Bengal there are known to be several layers of tenants and subtenants between the *Zamindars* and men who actually till the soil The former princely states still contain a great number of *Jagirdars*, *Inamdars*, and other holders of large estates under specially privileged tenures In Bombay, where the land holders are *raiyats*, we find many instances of cultivation by *halis* (debt slaves), and a large amount of crop sharing Punjab is generally thought of as the home of the sturdy self cultivators of small and medium sized *farms*, in practice both Punjab and Pepsu have large numbers of *Siris* (attached servants) paid in kind with a share of the produce, and *Muzara* (particularly insecure tenants) Malabar has its characteristic quadrate structure of *Janmis, Kanamdars, Verumputtamdars* and *Cherumas* From Tamil Nadu, historically a *raiyatwari* area like Bombay, we hear frequent stories of conflicts between the aristocratic *Mirasdars* and the lowly *Pannaiyals*[1]

This description of the agrarian structure by Thorner is 20 years old and has been substantially eroded even at the time of his writing in 1956 The agrarian reforms and land acts which were brought into force just before independence and after independence in 1947 have abolished many of the practices such as *Zamindari* and *Jagirdar* systems However, it cannot be said that the landlord tenant labourer structure has completely vanished The absentee landlords are still there, so are the debt slaves or bonded labourers A new class of capitalist farmers have emerged in some prosperous parts of the country such as Punjab Andhra Pradesh Tamil Nadu and parts of Karnataka Thorner's further classification of the agrarian structure into three groups such as *Malik* (proprietors), *Kisan* (working peasants) and *Mazdurs* (labourers) is more apt in the present Indian condition

[1] By *malik* or proprietor we will refer to a family whose agricultural income is derived primarily (although not necessa

nly solely) from property rights in the soil'[2] This income may be a share of the produce in the form of rent from a tenant or the income produced by himself by engaging labourers A *malik* may or may not work in the field, and may use hired labour, depending upon his status and the size of the holding In fact, two sub-groups are identified (1) absentee landlords and (2) small proprietors who work on their land as well as manage the cultivation

The second group consists of *kisans* who are normally small owners or tenants with varying degrees of security By and large they may have inferior legal rights to the land to those of the *maliks* Most often he is a subsistence farmer who may even sell his labour to others ' Kisans as defined here are those villagers who live primarily by their own toil on their own lands They do not employ labour except briefly in the ploughing or harvesting season nor do they commonly receive rents'[3]

The third group are *ma'durs* or labourers who live entirely by selling their labour on other people's land It is true that a few of them have rights to small bits of property mainly for their homesteads But traditionally they are used to staying on others' land

This agrarian structure which has evolved from the traditional systems by about 1950's and 1960's has undergone little change since then, except in the size of the holding It is also noted that the agrarian relations are further complicated by caste tenure relationships In most cases it is the upper castes who constitute the bulk of the landlords or *maliks* and the lower castes especially the scheduled caste constitute the labourers

The political movements organised on a caste basis during the last twenty years have resulted in the rise of many middle class castes to the land owning *malik* class, but the position of the Harijans with respect to land ownership is seldom affected It is also noted that a number of capitalist farmers who have risen in the wake of the green revolution and modern methods of farming are now wielding substantial political and economic power in many villages This group has risen by agglomerating land under their ownership much against the intentions of the land reforms

The statistics regarding land holdings are collected through
the agricultural census and the national sample survey For
the purpose of the census and the survey, the land holdings
have been classified under five types This classification do not
take into account the ownership Prior to 1970, however, there
was no such classification The categories of holdings under
the census are as follows :

1	marginal	less than one hectare
2	small	1 2 hectares
3	semi-medium	2-4 hectares
4	medium	4-10 hectares
5	large	10 hectares & above

The marginal holdings may be of *kisans*, but by and large
are of labourers The small and semi medium as well as *part
of the medium* and a small percentage of large holdings may be
constituted by *kisans* , the rest by *maliks* The following Table
6 5 gives the distribution of operational holdings during
1953-54, 1959 61 and 1970-71 As the table suggests, the
structure of distribution has undergone very little change,
except that the marginal farmer's proportion has increased
and proportion of larger holdings has decreased slightly The
total area has increased, but their distribution has more or less
remained the same

The agricultural census report of 1975 suggests that the
*total net area under cultivation in the country constitutes about
90 per cent of the area under operational holdings* More than
half of the operational holdings are marginal or submarginal
holdings which covers only 9 per cent of the total area, the
average size of a holding being 0 4 hectare *Small and semi
medium holdings together constitute about one-third, and
medium holdings a little more than one tenth, and they each
covered less than 30 per cent of the total area By contrast,
the large holdings account for only about 4 per cent, but
together they hold more than 30 per cent of the area How
ever, it is noted that much of these holdings must have dis-
appeared now because of the revised ceilings recommended by
the Central Land Reforms Committee in 1972 The census
compared with the survey reveals the fragmentation that is

Table 65 · Size distribution of operational holdings

Size of holdings	1953-54				1959-61				1970-71			
	No in 1000s	% to total	area in 1000 hectares	% to total	No in 1000s	% to total	area in 1000 hectares	% to total	No in 1000s	% to total	area in 1000 hectares	% to total
Marginal (less than 1 hectare)	17361	39.14	4481	5.43	19885	39.87	8993	6.79	35682	50.69	14545	9.00
Small (1 to 2 hectares)	9252	20.86	8262	10.01	11181	22.44	16224	12.25	13412	19.00	19282	11.90
Semi medium 2 to 4 hectares	8731	19.73	18370	22.26	9636	19.34	26926	20.33	10681	15.20	29999	18.50
Medium 4-10 hectares	6386	14.40	21196	25.68	6835	13.72	40819	30.82	7932	11.30	48214	29.70
Large 10 hectares & above	2604	5.87	30224	36.62	2307	4.63	39482	29.81	2766	3.80	49081	30.50
All	44334	100.00	82533	100.00	49824	100.00	132444	100.00	70493	100.00	161121	100.00

Source 1953-54 and 1959-61 are from National Sample Survey, 8th round, 16th round and 17th round. 1970-71 are from All India Report on agricultural census published in 1975.

Note The classification of National Sample Survey is not exactly the same as in the agricultural census because the census rounds were taken using Acre as the measuring unit. Therefore in the NSS data presented above, the categories have the following discrepancies: marginal 1.01 and below, small 1.01 to 2.02 hectares, semi-medium 2.02 to 4.05 hectares, medium 4.05 to 10.12 hectares, and large above 10.12 hectares.

taking place among the smaller holdings and the tendency
of concentration still continuing in the larger holdings. The
census further revealed that most of these holdings as much as
92 per cent were wholly owned and self operated, while only
about 4 per cent of the holdings (which is equal to the percentage
of the large size holding) were wholly leased. Another 4
per cent were partly owned and partly rented

The number of large sized holdings were more in Rajasthan,
Maharashtra, Madhya Pradesh, Gujarat, Haryana and Punjab,
all towards the North western part of the country. Kerala had
the lowest average size of holdings (0 07 hectares) followed
by Jammu and Kashmir (0 94) Uttar Pradesh (1 16) West
Bengal (1 20) and Tamil Nadu (1 45)

LAND POLICIES

The Indian Constitution lists land as a state subject which
means that each state in the country has the power to devise
policies regarding the use as well as control of land. This is
why the tenureship patterns, holdings as well as control over
land differ substantially over different states. The states have
adopted different types of land reform measures and there is no
co-ordination between them except for certain guidelines issued
by the Centre Therefore, it would be impossible to make a
survey of the land policy in different states within the confines
of this book. On the other hand we shall outline the general
trends and the policy guidelines issued by the Centre from time
to time

NATIONAL LANDUSE POLICY

The policy regarding the land use and management at the
national level relates mainly to forests. A national forest
policy was promulgated in 1950. This policy laid down
broad principles under which forests of different types were to
be administered. The policy resolution proposed that the area
under forest be really raised to 33.3 per cent of the total land
area, the proportion to be aimed at being 60 per cent in the
hilly areas and 20 per cent in the plains. Increasing emphasis
is being laid now on forest development programmes especially

on raising man made forests to meet the long term requirements of various forests products in general and raw materials for wood based industries in particular The measures to augment the fuel wood resources and small wood for farmers through social forestry schemes have also been initiated As the quantum of housing construction increases it is estimated that the demand for industrial wood would be increasing which would require a production of at least 22 5 million cubic metres by 1980 and 41 million cubic metres by 1990 against the present level of over 8 million The fuel wood demand is also expected to rise steeply from 200 million cubic metres to 300 million in the next 15 or 16 years

With this forest development in view the national commission on agriculture has worked out a desirable pattern of land utilisation for the next 25 years which is given in Table 6 6 A policy for the conservation of land and allocation of macro use of land is being considered at the national level at present The other forms of control over the land (both urban as well as rural) is guaranteed by the 'eminent domain' as per the Land

Table 6 6 Pattern of land utilisation (million hectares) during 1970 71, 1985, 2000

	1970 71	1985	2000
Area under forest	66 0	70 0	70 0
Area not available for cultivation	45 4	54 0	56 0
(i) area under non agricultural uses	16 2	21 5	26 0
(ii) barren & uncultivable land	29 2	32 5	30 0
Other uncultivable land excluding fallow land	33 8	32 5	29 0
(i) permanent pastures & other grazing land	13 3	14 0	15 0
(ii) land under misc tree crops & groves not	4 4	5 0	5 0
included in net area sown	16 1	13 5	9 0
(iii) culturable waste	19 7	16 5	13 0
Fallow land	8 6	7 0	5 0
(i) other than current fallows	11 1	9 5	8 0
(ii) current fallows	14 0 4	14 5 0	15 0 0
Net area sown	30 5 3	318 0	18 0
Total reporting area	22 7	10 0	10 0
Area for which no returns exist	328 0	328 0	328 0
Total geographical area			

Source National Commission on Agriculture 1976 Ministry of Agriculture & Irrigation

Acquisition Act of 1894 Under this, state as well as central
governments have powers to acquire land for the purposes of
public good. The public undertakings, like railways, electricity
boards etc are also given powers to acquire lands under
respective acts

Nevertheless, all these policies and provisions remain grossly
inadequate for the better and scientific management of land
which is a scarce and important as well as problematic resource
in India A lot needs to be done in the area of land ownership
and tenure, which is the crux of land problems in India

RURAL LAND REFORMS

During the 1950 s and 1960's a number of land reform
measures came into being in different parts of the country The
first principle of land reform to be put into operation was "land
to the tiller". This meant the elimination of the absentee
landlord and the intermediaries. The ownership rights were also
conferred on tenants in some states such as Andhra Pradesh,
Assam, Gujarat, Himachal Pradesh, Jammu and Kashmir,
Karnataka, Kerala, Maharashtra Madhya Pradesh, Manipur,
Orissa Rajasthan, and Tripura. In some states there is provi-
sion for the tenants to purchase the land which is cultivated
by them, while in U P. and West Bengal all cultivators including
sub-tenants have been brought under direct con'act with the
state The security of tenure under the laws are of varying
degrees, but the eviction of tenants without proper reasons, is
forbidden everywhere Most of these land reform Acts also
provided for fixation of a fair rent Added to these above men
tioned measures, consolidation of holdings against fragmentation
was also attempted by all states except in some parts of
Andhra Pradesh, Arunachal Pradesh Mizoram, Manipur,
Meghalaya, Nagaland, Tripura and Kerala.

The Planning Commission land down four principles of land
reforms which consisted of (1) the elimination of idle landlords
and intermediaries, (2) a ceiling on holding of substantial
owners, (3) a confirmation of permanent rights to actual culti-
vators with the option for the lessee to purchase the holding
outright at a fair price, and (4) the fixation of rent. As described
earlier, all these except that of ceilings were attempted by states

prior to 1960, that means before the reorganisation of the states in 1957 The ceiling came very late, only from 1960 onwards Now it is in force in most states and this prevents a person from holding or acquiring land beyond certain limits The provisions regarding the level of ceiling the unit of application of ceiling and the rules regarding exemptions, vary considerably from state to state During 1972 the central land reforms committee recommended a revision of the ceiling As per their recommendation the ceiling should be reduced to 4 to 7 hectares (10 to 18 acres) for irrigated land growing two crops about 11 hectares (27 acres) for partially irrigated and growing one crop and about 22 hectares (54 acres) for dry land, for a family of five, consisting of father mother and three minor children The committee also recommended for the removal of exemption granted by earlier enactments Legislative measures in accordance with national guidelines have been done in all the states where land ceilings are applicable Nagaland, Meghalaya, and the Union Territories of Arunachal Pradesh and Mizoram do not need such ceiling acts as the land is commonly owned by the community while in Lakshadweep there is no holder with lands beyond the ceiling

The surplus land which is over 15 lakh hectares has been taken possession by the state and has been distributed among landless agricultural labourers particularly those belonging to scheduled castes and tribes A central scheme is also in operation for providing suitable assistance to the allottees of surplus land

However, the provision on ceiling is one aspect of land reform which is least implemented Many states still have large holdings as the legal procedures go on for a very long time A few states such as Kerala and West Bengal are in the forefront in this regard due to the political awareness of the people It is to be noted that the land ceiling provisions were implemented very quickly in Kerala mainly through the political process In 1970 a 'land grab movement' spearheaded by leftist politicians accelerated the administrative procedure

Another central guideline which was issued to the states and union territories was regarding the homestead rights in 1973 The provision conferred ownership for all the rural folks for a bit of land on which their house was situated and which

might belong to other persons The ownership rights and security thus conferred vary significantly between states

During the emergency period, directives were also given to the states to distribute house sites among homeless agricultural workers, artisans, craftsmen etc , under the 20-point programme It is estimated that 71 lakh house sites were distributed by the end of 1976 among the rural poor. However, this was not an emergency programme alone and was in force before and is being continued now.

With the change in the government in 1977 some changes have also occurred in the policies regarding land In the election manifesto, the Janata Party committed itself to "agricultural reforms covering tenurial relationship and consolidation of holdings". It further stated that

> Owing to the tardy and insincere implementation of land ceiling legislation, the available surplus land declared, much less distributed, has been pitifully small The party will honestly implement land legislation, provide machinery for scrutinizing fraudulent transfers and dispossession and plug such loopholes as have come to light Land lordism will be abolished

In the economic policy statement the Janata Party had this to say

> Agricultural productivity depends greatly on the manner land is held and operated or the kind of agrarian structure a country may have The Janata Party believes that a system of small independent peasant farms assisted together by service cooperatives, will meet our needs or fulfil the aims of our economic policy best It will produce more crops, provide employment for more workers, lead to more equitable distribution of wealth or avoidance of undue disparities in incomes and help strengthen democratic trends more than any other system of farming

However, the new government is opposed to any lowering of the ceiling and considers that it is necessary also to have a floor below which the land should not be allowed to fragment

Consolidation of holdings is considered important The policy statement of the Party adds

National interest demands that a floor on land holdings is also laid and that the law relating to inheritance transfer and partition of land is so amended that the *area of land per farmer or agricultural worker is not reduced below 2 5 acres* This will be possible, however, only if diversification of the economy and industrialization proceeds at a pace faster than the pace of population growth

Consolidation of holdings is the first step towards modernization of agriculture Therefore, the Government should see to it that the consolidation of holdings operations are completed in all States as early as possible (italics ours)

In his book *India's Economic Policy*, Charan Singh, then Union Home Minister, argues that the ideal size of a farm would be between 25 and 33 3 acres, to be exact 27 5 acres (11 hectares) There are many in India who consider that this ceil ing is too high It is unscientific to prescribe a uniform ceiling for all the parts of the country The economic returns from the land, as Charan Singh has argued, cannot be the only base for working out land reform policies

The new government is however keen on improving the land resource by proper scientific methods To quote the policy statement again*

To maintain fertility of the soil is an important objective of agricultural policy The nation's soil resources constitute its greatest wealth ... In the long run, therefore, soil conservation is even more important than soil utilisation Government must, therefore, take all measures for maintenance of the country's soil Government should, therefore, increase the allocation of resources for soil conservation, land reclamation afforestation, flood control and agricultural research and extension work

However, the government has not taken any concrete steps to implement their stated intentions One interesting fact that is always

seems to escape the arguments both for and against the land ceilings and utilizations, i e , there is not enough land in this country to distribute among all the needy and the majority of the ruralites comprise very small farmers or landless labourers. Most important among the attempts to change the production relations in the agricultural sector should be safeguarding the interests of these people by fixation of a minimum wage, time for work, as well as providing security of work If agricultural labour can be provided with working conditions similar to industrial labour, this would be a first step towards their upliftment

Urban Land Policies

Governments in India have been accused of an urban bias For instance, whereas certain types of land ownership have been abolished (absentee estate owners) or curtailed in rural areas (through ceilings on land holdings), there has been no similar absolute restriction on urban wealth The rural aristocracy has been curbed, where it continued to flourish, it does so by getting around the laws or by transforming the pattern of its economic activities Urban capitalists have however, been given unlimited freedom to speculate on land. Palatial mansions have come up in the cities, posh colonies flourish, putting into shade the past glories of feudal luxury Partly in response to this argument, and partly to release urban land for use by the less affluent, the Land Ceiling and Regulation Act, 1967 was passed by the Congress Government during the emergency The purpose of the Act was given in the *Statement of Objectives*

> There has been a demand for imposing a ceiling on urban property also, especially after the imposition of a ceiling on agricultural lands by the State government With growth of population and increasing urbanisation, a need for orderly development of urban areas has arisen It is therefore necessary to take measures for exercising social control over the scarce resources of urban land with a view to ensuring its equitable distribution amongst the various sectors of society and also avoiding speculative transactions relating to land in urban agglomerations.

POLICIES ON LAND AND ENVIRONMENT

Specifically, the objectives of the Act are

(a) to prevent the concentration of urban property in the hands of a few persons and speculation and profiteering therein

(b) to bring about socialisation of urban land in urban agglomerations to subserve the common good by ensuring its equitable distribution,

(c) to discourage the construction of luxury housing leading to conspicuous consumption of scarce building materials and to ensure the equitable distribution of such materials,

(d) to secure orderly urbanisation and

(e) to make land available in adequate quantity at the right time and for reasonable prices to both the public authorities and to individuals

The ceiling on urban land holdings varied with the size of the city the larger the city the smaller the permitted maximum It was as follows

Class of city	Max plinth area for construction	Ceiling limit	Max value
A	300 sq m	500 sq m	Rs 10 per sq m
B	300 sq m	1000 sq m	Rs. 10 per sq m
C	500 sq m	1500 sq m	Rs 5 per sq m
D	500 sq m	2000 sq m	Rs 5 per sq m

Note A Bombay, New Delhi, Calcutta and Madras and 8 km around

B The remaining 5 million cities and 5 km around

C 35 major cities listed by the Govt., and 5 km around

D 29 cities listed and 8 km around More cities of Class I may be brought under this by state governments with the approval of the centre The other urban areas were excluded from the Act

The Act provided a ceiling on both ownership as well as possession of vacant land in urban agglomerations according to

the categories mentioned above It empowered state governments to acquire vacant land by paying 25/3 times the net average annual income during five consecutive years subject to a maximum according to the schedule noted above It was also decided to set up urban land tribunals In an addendum to the policy, the Finance Minister in his budget speech of 1976 said urban land that

> There is acute shortage of housing, particularly of the kind required by the poorer sections of the community House construction is entitled to be created as a major industry in its own right Apart from fulfilling the basic human need for shelter, it generates considerable employment, both direct and indirect Increased activity in this sector will also improve the demand for materials like cement, steel and coal for making bricks To attract more resources for this neglected but essential purpose, I propose to exempt new dwelling units put up after 1 April 1976 with a plinth area up to 80 sq metres from wealth tax for a period of five years Initial depreciation will hereafter be available in respect of houses constructed by employers for use as residence of low paid employees having an annual salary income up to Rs 10 000 instead of Rs 7,000 as at present

It is only fair to add, that after creating an initial stir, the Urban Land Ceiling Act became virtually a dead letter The Janata government in addition to its rural bias, is committed to reduction of government intervention in economic and public affairs Consequently, it proposes to repeal or at least weaken the Urban Land Ceiling Act

URBAN LANDUSE PLANNING

Urban landuse, as mentioned earlier, is in a haphazard condition The responsibility for devising policies and strategies for urban development lies entirely with the state governments The Central Government's role here also is one of guidance with little coordination Though land and some aspects of urban development are subjects of the states, the planning for urban

areas is neither included in the state list nor in the central list. However, the states have taken the responsibility as the problem is quite pressing

The urban landuse planning is a fairly newcomer in the field of public administration in India The planning function before 1947 was limited to a few areas like Madras, Delhi and Bombay These large cities were partially planned under the patronage of the then British administration and mostly related to the planning of new layouts At best, it planned for a new administrative extension like New Delhi

Apart from these the municipal acts provided for marginal functions to the municipalities for planning, but almost nothing happened The inadequacy of municipal laws in matters of town planning and development was appreciated to some extent early in this country The earliest attempts at town development resulted in the creation of Town Improvement Trusts The Town Improvement Trusts were established under the Acts as early as 1898 in Bombay, 1911 in Calcutta, 1919 in Uttar Pradesh which was followed by a number of enactments in other parts of the country The trusts, however, did not have the power to prepare master plans, though they were supposed to prepare layouts for new extensions and redevelopment schemes for old areas and implement them More recently, Bihar and Rajasthan enacted legislation under which Town Planning Trusts were empowered to prepare master plans also Apart from these Town Planning Trusts, a number of town and country planning departments also came into existence in almost all states and in Union Territories after independence Now most states have fairly well developed town planning departments to look after the urban planning, as well as regional planning in some states Many larger cities like Bombay, Delhi, Madras, Calcutta Hyderabad and even some smaller cities now have urban development authorities to look after the planning as well as development

These planning activities at present are facilitated legally by the town planning legislations in the states The earliest legislation was enacted in Bombay in 1915 and in Madras in 1920 During the 1960 s the Town and Country Planning Organisation of the Government of India circulated a model Town and Country Planning Act, based on which many states have enact-

ed legislations But there are still some states like Kerala which do not have an act they work under the rules framed as early as 1920 Even the new acts are modelled after the 1947 Act of the U K, and is very much outdated and inadequate Problems have arisen in urban development especially in the case of new town plans and metropolitan development Therefore a number of amendments to the Town Planning Acts have come into being for accommodating the new development authorities more about which will be discussed in another chapter

These acts give powers to the state only for the preparation of master plans which in principle is based on maintaining the status quo rather than planning for change The concept of master plan under these acts is very rigid, idealistic and most often turns out to be incongruous with the socio economic reality It is based on control of land rather than on generating positive forces of development This is probably why more than 500 master plans prepared in the last twenty to twentyfive years in the country and its documents on paper Perhaps only about 20 per cent of these plans have been implemented in one form or other

The plan preparation is also highly bureaucratic and design oriented and is understood more or less as an engineering exercise Most of the town and country planning departments in this country have come into existence as appendages of the public works department and are therefore staffed mainly with engineer and architect planners What India's urban planners are attempting now is to transplant borrowed concepts which were current at least 30 years ago in the west on to the Indian situation These concepts have become antiquated and were discarded by the donor countries themselves long back Many Indians have commented on this,[4] but let us see what Webber from the west says

The plans of MMDA are presented in the traditional town planning idiom that was popular in Britain and America a generation ago the plans and reports prepared by MMDA and its predecessor town planning agencies are virtually devoid of social and economic analysis over the long run MMDA, CMDA and similar agencies will make the same discoveries that their counter part agencies

in the west have made If they were to search for social betterment solely through efforts to *improve the physical environment they are sure to suffer the same disappoint ments and disillusions that westerners experienced* [5]

As could be seen from the above discussion there is confusion and haphazardness in the urban landuse planning activities in the country Urban planning in India still has the aesthetic and traffic priorities Orderliness in land use and wide roads for ease of traffic are considered almost as the prime aims of urban planning Therefore urban planners refuse to consider anything which goes beyond layout designs and landuse plans There is no clear cut policy in this regard either at the centre or in the states As in the case of engineering works urban planning is done on an *ad hoc* basis, more often than not *the decision to plan for a city arriving much later than when it is needed* Most governments are busy cleaning up the cities with slum improvement schemes or widening the streets or developing parks or laying down new residential estates The overall concept of urban development is totally lacking The new Janata Government seems to have discarded this dimension altogether though their policy statement mentioned the need for preparing regional plans for all metropolitan cities and master plans for all cities above a five lakh population with a green belt around all such cities Highly illogical emotional approaches to the question of urban development could be understood from the fact that many town planning departments and organizations in the states and central government are now frantically developing interests in village and rural planning as well, not because of conviction but for mere survival A balanced approach is lacking There is still a long way to go for a comprehensive and indigenous urban development policy

ENVIRONMENTAL MANAGEMENT

The environment—regional urban as well as rural—is steadily deteriorating in most parts of the country There has been reduction in forests loss of wildlife upsetting of ecology pollution of water and air soil erosion as well as the spread of dangerous and nuisance plants and weeds Added to this, a

there are also problems of natural catastrophes such as erratic rains, cyclonic winds, chronic droughts, earthquakes and occasional floods in some parts of this country The air in most of the metropolitan cities is critically worse, noise pollution equally bad, sanitary conditions appalling and congestion terrifying The rural settlements are also no better.

These dimensions of environmental changes have generated some concern by the Government of India and the state governments Environmental aspects have been considered important by the National Planning Commission as well as state planning boards A number of measures are also being undertaken Though there is no comprehensive environmental policy at present, the policies and plans regarding energy, transportation and resource development are all being analysed or viewed from the environmental angle as well The National Committee on Environmental Planning and Coordination has been established The Department of Science and Technology of the Government of India which is providing the technical secretariat for NCEPC is another agency which is concerned with environment Many state governments also have created environmental coordination boards or pollution control boards or such agencies Environmental legislation is also being introduced by the Central Government

The aspects of environmental care in India are broadly five

1 *Conservation* under which the national forest policy, wildlife policy, energy and resource development policy can be included

2 *Assessment* of environmental impacts of large scale development projects Most of this job is done by the science and technology department Such assessments as are required now, for the clearance of large scale irrigation projects resource development and industrial development projects etc are done by the Planning Commission However many projects have escaped such valuation, may be due to political pressures which are now under professional as well as public criticism and protest

3 *Pollution control* measures include research and development on aspects of pollution, levels of pollution, appropriate technology, waste management, environmental legislation etc This is still an infant field in India.

4 *Environmental improvement* To alleviate the sufferings of millions due to the hostile nature in some parts of the country, many programmes are undertaken to improve the environmental condition They include area development programmes under the Five Year Plans such as special programmes for drought prone areas, hill areas and command area of irrigation projects These are package programmes consisting of agricultural irrigation and infrastructure development so as to gradually save the area from the clutches of hostile nature or to increase the potential liveability of the areas concerned One large scale programme which has changed the face of the land substantially is the Rajasthan Canal programme covering the vast desert lands of Thar Once dry sand dunes this area has now been changing to green areas under this scheme, though the scheme has been criticised on other socio economic grounds

5 *Disaster relief* Many *ad hoc* programmes are initiated whenever there is a natural catastrophe such as floods cyclones or famine Most of these have become regular phenomena in some part or the other The Chief Ministers of the states and the Prime Minister of India have disaster relief funds from which part of the exigencies are met The army, police force, the navy, air force and voluntary agencies are pressed into action during such disasters A lot of energy gets generated during these emergencies The cyclone disaster which hit the east coast last year was one of the worst kinds in the recent years affecting more than 5 lakh families resulting in the death of about 100 000 persons and innumerable animals besides the loss of land, houses, and crops The actions that followed can be generally lauded for the spirit but can be criticised at the same time for mis management as well as wrong priorities The whole nation shared the sorrow that engulfed the east coast and money, men and material flowed into the affected areas However, the rehabilitation laid more stress on shelter and housing and concerned itself least with economic rehabilitation which was needed first

This is not an isolated case and the same things happen again and again There is however no policy regarding the disaster relief operations Only now there is a thinking towards some permanent arrangements, such as monitoring and warning

systems, and relief systems to alleviate major disasters and mitigate their effects

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2 ibid

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7

Shelter, Infrastructure and Services

IN A VAST country like India the provision of shelter, infrastructure and services has many dimensions and levels The policies relating to some of these cannot be analysed in the traditional conceptual boxes of urban and rural settlements The interplay of the provisions of services and the development of the settlement system and the infrastructure system are quite complex So are the policies regarding these, as there is no explicitly stated policy comprising all these dimensions aspects and levels. Policies have been evolved with regard to different infrastructure services, social services etc for different settlements and administrative systems from time to time, but they are not very well linked or considered together In this chapter we will analyse the trends in policies with respect to the national and regional systems, the urban systems and rural systems with respect to the provision of shelter, infrastructure and service

THE NATIONAL/REGIONAL SYSTEMS

The national support systems for habitat development and the policies relating to them correspond mainly to transportation systems, water and other environmental systems as well as communication and distribution systems for goods and services

Transport

The amount of movements at the national level of men as well as materials has been increasing quite fast This is also related to the uneven distribution of resources in the country

Studies indicate that the passenger traffic by road and by rail is expected to be doubled by the end of this century Over one half of the additional traffic is expected to be by road

There has been tremendous development in the field of transportation in India in the past There is a very good system of railways, a good network of roads in most parts of the country, a fairly well developed air transport system and a lot of opportunities for developing internal navigation A variety of agencies both public and private operate at national state and local levels in the field of transportation However, there is no guiding policy at present which links and provides a basic frame-work for the development of different sectors of transport The railways and airways are managed entirely by the centre while the responsibility for managing road transportation is shared by both state and central governments Inland navigation is almost a neglected area except in some parts of the country The pricing and tariff of various forms of road transport are also not uniform throughout The following tables give an idea of the transportation development in the country (See Tables 7 1 and 7 2)

The Indian Railways form the largest government under taking in the country The Railways are preparing a long range corporate plan for the year 1989 with the following objectives in view

(i) to provide rail transport for both passenger and goods adequate to meet the demand in such areas for which railway operation confers optimum benefits to the economy having due regard to government's policy of development of backward areas

(ii) to provide such rail transport at the lowest cost consistent with

   (a) the requirements of the railway users and safety of operation

   (b) adequate provision for replacement and some provision for the development of business and

   (c) the least amount of pollution of the environment

(iii) to work in association with or utilise other modes of transportation such as pipelines and road transport corporations and to engage in ancillary activities necessary to subserve the above objectives

Table 7.1 : Transportation development†

	RAILWAYS†				ROADS		
	Route length in Kilometres		Total	Railway track	*	**	***
Year	Electrified	Non-electrified					
1950-51	388	53,208	59,596	59,315	157	243	400
1960-61	748	55,497	56,247	63,602	263	261	524
1970-71	3706	56,060	59,766	71,669	421	543	964
1971-72	3933	56,115	60,068	71,225	472	658	1130
1972-73	4055	56,094	60,149	73,644	474	680	1154

†India 1975, Ministry of Information and Broadcasting
*Surfaced Road (000) Km
**Unsurfaced Road (000) Km
***Road length (000) Km

Table 7.2 : Vehicles on road (31 March 1972)‡

	Motor-cycles scooters etc	Private motor cars	Auto-rickshaws & taxis	Buses	Goods vehicles	Misc	Total vehicles registered
Number	645 608	671,283	108,133	99,960	363,916	143,469	2,032369
Percentage	31 76	33.02	5 31	3 91	17 95	7.05	100

Source : ‡Transport Research Division, Ministry of Shipping and Transport—December, 1975, cited in *India, Country Report*, op. cit.

The policy on road transport is to share the responsibility between state and centre as mentioned earlier As per this understanding, a system of (a) national highways, connecting capital and other important cities in the country, (b) state highways connecting district headquarters and other important places in the state, (c) district roads connecting important places in a district, (d) other than district roads, and (e) village roads have been planned. The centre plans and bears the expenses of construction and maintenance of national highways. The state is to look after the rest. A national permit system was also introduced in 1976 under which private transport vehicles were issued licences to ply in different states. The policy of taxation on motor vehicles has been to discourage the use of luxury vehicles and motor cars and to promote two wheelers.

The air transport sector works more strictly on a commercial and profitability basis except in the case of a few strategic routes.

Inland waterways are under operation only in certain parts of India. The Central Inland Water Transport Board has formulated a programme for the development of inland water transport. The inland water transport directorate gives technical advice to states which are responsible for the development of inland water transport. The states of Andhra Pradesh, Assam, Karnataka, Kerala, Madhya Pradesh, Maharashtra, Orissa, Uttar Pradesh, and West Bengal and the Union Territories of Goa, Daman and Diu have set up inland water transport organisations to formulate and implement schemes.

Water, and especially sharing of water, between states for irrigation has been a major problem in India. When some rivers flood in the north, others dry up in the south. Talks have been in the air for an integrated grand irrigation system connecting various rivers with channels, vertical as well as horizontal, which may be used for irrigation as well as transportation purposes. The new Janata Government has re-iterated the need for such a water system as well as a national water policy and priorities for the use of water with water budgeting and water audit.

The transport policy of the Sixth Plan stresses the development of those sectors of transport which would be more bene-

ficial to rural areas The plan promises to give greater attention to build up a transport system required for transporting agricultural surpluses from villages to *mandis* and the movement of rural products to cities and towns. This transportation system would also help in delivering inputs to rural areas such as fertilizers, seeds, etc It is also argued by the Plan that railways are more capital intensive than roads and therefore greater importance should be given to roads Investment in the next five years in railways will mainly be augmenting the capacity of existing lines On the road sector, it is now proposed to extent accessibility by road to all the villages in India by the end of the Plan A high level committee to study and recommend an integrated transport policy is being set up [1]

Communication

The communication system in India consists of a network of post and telegraph offices and a network of telecommunication systems This sector is entirely controlled by the national government and is fully nationalised In spite of the commercial overtones the policy of the government has been to consider P&T essentially as a public utility service Consequently India offers one of the cheapest P&T services which are quite extensive and fairly efficient The post offices serve also as savings banks as well as undertake a few other services such as receipt of certain licence fees The new Janata Government proposes to continue the same policy and expects to extend the daily delivery system to nearly all the villages this year [2]

The tele-communication system in the country consists of telegraph, telex telephones, microwave stations, satellite communication centres and monitoring organisations These services mainly help the administration, business as well as industry and are therefore, more urban oriented However, the policy of the government has been to give fairly high priority to communication development

Distribution System

The human settlement development is also affected by the distribution system of essential goods The present system

works through a number of government, semi government and private agencies. At times, however, there had been instances of the system failing in providing essential goods all over the country without affecting prices. The new Janata Government is thinking of a permanent machinery for the distribution of commodities of mass consumption.[3]

Mohan Dharia, the then Union Minister for Civil Supplies and Co-operation stated in a press conference in Madras on 5 June 1977

> A massive national public distribution system would be ensured in consultation with the state governments, the Planning Commission and experts to permanently solve the problems of vagaries of prices of essential commodities When one thought of making available essential articles of consumption to the common man at fair prices, arrangements have also to be made to see that agricultural inputs like *fertilizers* and *pesticides are made available to the farmer at reasonable prices*[4]

URBAN SYSTEMS POLICY

Shelter

There had been no major officially sponsored housing programme in India before independence in 1947 except for a few isolated attempts to house their employees by the central and provincial governments. The responsibility of housing every Indian decently in a good environment has been accepted by the government since the institution of the republican constitution of India in 1943 Since then government's involvement in housing has been progressively increasing Government has mooted several programmes to increase the production of shelter in the country; some of them implemented directly by the government and some others indirectly through incentives, subsidies etc. They are all aimed at reducing the gap between demand and supply of shelter sometimes even at the cost of minimum standards.

The involvement of government has led to the evolution of

a 'housing policy understanding', though a policy statement is conspicuous by its absence. What has been evolved is a set of housing programmes under the different Five Year Plans. Since the second Five Year Plan, the provision of shelter with minimum facilities for the economically weaker section of the society, especially in the industrial metropolises has become a major segment of the welfare programme of the government.

The urban housing programmes of the Government of India could be categorized under two major groups,

    (i) non subsidised programmes,

    (ii) subsidised programmes

A few major schemes under these programmes are described below.

Non subsidised Urban Housing

Land acquisition and development Under this scheme financial assistance to state governments is given in the shape of a loan repayable over a period of 10 years for acquiring and developing lands in selected areas. The land acquired is to be utilised for house building under different schemes and for the provision of related community facilities like parks, playgrounds, schools, shops, hospitals, offices, etc. The scheme is executed through Housing Boards, City Improvement Trust Boards, and local bodies. The local standards regarding physical planning formulated by local bodies and Town Planning Departments are followed. Now the Housing and Urban Development Corporation (HUDCO) is also providing financial assistance for these 'site and service schemes'.

Being an essentially urban scheme it is designed to stabilise land prices, rationalise urban development and promote the growth of self-contained composite colonies in accordance with the overall master plan for an entire area. Where such plans are not ready, the land use should conform to the general ideas of the prospective development in the area.

The state governments are expected to give out land on lease hold basis, in order to avoid speculation on land.

Low income group housing scheme The Low Income Group Housing Scheme was introduced in November 1954 for providing long term house building loans at a reasonable rate

of interest to persons whose incomes do not exceed Rs 6,000 per annum.

Assistance was available to individuals as well as cooperatives whose members fulfilled the condition of maximum income of Rs. 6 000 per annum In 1968, the income range was changed fixing a minimum of Rs 4,200 per annum and a maximum of Rs 7,200 per annum. Persons below a Rs. 4,200 income were included in the subsidized housing schemes for the economically weaker sections The assistance was restricted to 80 per cent of the estimated cost of construction including land and subject to a maximum of Rs 8,000 * Under the scheme, loans were available to state governments at a very low interest rate repayable in three years for the acquisition and development of land by local authorities for allotment to prospective builders. Loans were also available to local bodies, charitable institutions, hospitals, etc., for building houses to be let to their low paid employees or on hire purchase terms.

Accommodation to be provided in each house built under this scheme should not be less than 232 sq ft and not more than 1,200 sq ft of floor area. The state governments were expected to ensure that, as far as possible, two-roomed houses were built and costly structures were discouraged

Middle income group housing scheme The MIG Housing Scheme providing loans to middle income groups was introduced in February 1959, with the funds provided by the Life Insurance Corporation

Individuals whose income were between Rs 6 000 and Rs 12,000 per annum were eligible for assistance Loans were advanced to the extent of 80 per cent of the cost of the house subject to a maximum of Rs 16 000 (20 000 in the case of those who do not already possess a plot of land). Later, in 1968, after the Housing Ministers Conference in Madras, the scheme was modified and the loan ceiling was increased to Rs. 25,000 as against Rs 20 000 and the eligibility range was also increased from Rs. 7,200 to Rs. 15,000. The ceiling at present is Rs 42,000

Assistance to Housing Co-operatives, Housing Boards, etc. is also available for building houses through any government

* Now the ceiling has been raised to Rs. 18,000 repayable with an interest of 7½ p.a. within 15 years.

or semi government agencies for sale to eligible individuals either outright or on a hire purchase basis Assistance is also given for building houses through a government or semi-government agency for the purpose of renting them to eligible individuals

The state governments may, if they so desire entrust the implementation of this scheme to their Housing Boards/Housing Corporations and authorise them to enter into agreements with the L I C and draw advances from them directly But, the state governments have to remain completely responsible for the repayment of the loan to the Corporation

The floor area of the house proposed to be built under the scheme shall not ordinarily be less than 700 sq ft

Housing for dock labourers Under this scheme, loan assistance was given to the Dock Labour Boards at Bombay, Calcutta and Madras covering 80 per cent of construction to build houses for workers registered with them The standards were evolved locally in compliance with minimum standards prescribed by the Planning Commission

Housing for mining labour The Coal Mines Labour Welfare Board can obtain land from colliery owners on lease for a period of 40 years free of cost or at nominal rent Houses will be constructed by the Board and the colliery owners will pay the Board rent at Rs 2 per tenement per month and workers will be charged rent not exceeding the contribution made by the Board There is no prescribed standard Usually huts are constructed

The central government under the scheme for the grant of house building advances, provides advances up to 24 months pay, subject to a maximum of Rs 25,000 for new houses and Rs 10 000 for extension These will be repayable at 4½ per cent interest per annum over a period of 20 years

Subsidized Urban Housing Schemes

Integrated subsidised housing scheme In September 1952, the subsidised housing scheme for industrial workers was formulated by the Ministry of Works, Housing and Supply of the Government of India The scheme envisaged the grant of financial assistance to the state government, statutory Housing,

Boards Co-operative Housing Societies of industrial workers
and private industrial employees Under it, the central
government took upon themselves the responsibility for provi
ding 100 per cent finance, 50 per cent as outright subsidy and
50 per cent as long term interest bearing loan to the state gov
ernment to enable them to build houses for eligible categories
of industrial workers governed by the Factories Act, 1948 The
financial assistance admissible to the co-operative societies as
well as to the employers was a 25 per cent subsidy and a 37½ per
cent loan The central assistance was based on the basis of a
ceiling cost The scheme has been revised substantially several
times and was later integrated with housing for economically
weaker sections of the society, whose annual income is below
Rs 4 200 The ceiling costs also were revised for different
types of accommodation and places The scheme is now known
as the ISHS for industrial workers and economically weaker
sections

With the integration of housing for economically weaker
sections with the housing for industrial workers, the standards
were thoroughly changed recently to make them at par with slum
clearance and improvement schemes The Government of India
appointed a Committee in 1971, under the chairmanship of
the Joint Secretary in charge of Housing in the Ministry of
Works and Housing, to look into the matters of standards rela
ting to integrated subsidized housing schemes for industrial
workers and economically weaker sections of the community
The Committee submitted its report in 1972

The Committee suggested 5 types of accommodation,
namely,

    (i) open developed plot
    (ii) small two-roomed houses,
    (iii) regular two-roomed houses
    (iv) hostels and
    (v) dormitories

The open developed plot scheme was recommended only in
the case of cities up to 500 000 population and plot sizes were
fixed at 360 sq ft (33 44 sq m) The minimum accommodation
suggested for two roomed houses was 188 sq ft (17 48 sq m)
with a living room, a multipurpose room including kitchen a
bath and a water closet It was also suggested that if local con

ditions so require, one bathroom and lavatory may be provided
for two houses, instead of a bathroom and lavatory for each
house independently

For a regular two-roomed house (double and storeyed) a
floor area of 288 sq ft (26 76 sq m) per house at all places
except Bombay and Calcutta and 232 sq ft (21 55 sq m) per
house in Bombay and Calcutta were recommended

In the case of hostel and dormitory type accommodation
for single persons an area of 112 sq ft (10 40 sq m) and 87
sq ft (8 08 sq m) respectively were recommended

Slum clearance improvement scheme This scheme intro-
duced in 1956 contemplates the grant of financial assistance
by the central government to state governments and union
Territories for slum clearance and improvement projects The
two important principles on which the scheme is based are

(i) There should be minimum dislocation of slum dwellers
and efforts should be made to rehouse them as far as possible on
the existing sites of the slums and/or sites nearby in order to
ensure that they are not uprooted from their fields of employ
ment

(ii) In order to keep down rents within paying capacity of
slum dwellers, the emphasis should necessarily be laid more on
provision of minimum standards on environmental hygiene
and essential services rather than on construction of any
elaborate structure

This scheme which is being implemented through the state
governments provided for

(a) the acquisition of slum areas and the re-housing of
families living in slum areas whose income does not
exceed Rs 350 p m ,

(b) the improvement of environmental conditions in exis-
ting slums (e g paving of streets provision of W C s ,
water supply, street lights and drainage),

(c) construction of night shelters (to provide sleeping
accommodation to pavement dwellers on a nominal
charge)

The scheme has since been transferred to the state sector
and financial assistance is provided by the Government of India
in the shape of block grants and block loans which the state

governments are free to utilise in accordance with their own priorities and requirements

The state governments and local bodies can provide dwelling units i e open developed plots, skeletal houses dormitory/hotel type accommodation or *pucca* tenements to the slum dwellers The cost of these dwelling units ranges between Rs. 1,850 and Rs 8,750 per unit, and the subsidized rental (based on 50% of the approved cost of construction) ranges between Rs 6 and Rs 39 per month, depending upon the type of construction and the place of construction

The improvements in environmental conditions in slum areas and improvement of *pucca* built slum dwellings that may be undertaken under the scheme comprise the following items

(i) Improvement of environmental conditions which comprises the following items within (and not outside) the slum area taken up for improvement

    (a) laying of water mains, sewers and storm water drains,

    (b) provision of community baths, latrines and water taps

The existing ceiling costs of houses admissible for central assistance under the scheme are as under

(i) Normal two-roomed house	Rs. 5,000
(ii) Small two-roomed house	Rs 4 000

Financial assistance (loan and subsidy) is made available by the centre to the governments of concerned states for implementation of the scheme The loan content of the assistance is repayable by them in 25 years with rate of interest as may be fixed by the central government from time to time.

Central scheme for environmental improvement in slum areas This scheme was introduced in 1962 to provide financial assistance by the central government to the state governments undertaking works of environmental improvement in the existing slums which are not earmarked for clearance for a *minimum period of ten years. 20 cities were covered under this* scheme Improvements may include

    (i) laying of water mains, sewers and storm water drains

    (ii) provision of community baths latrines and water taps

    (iii) widening and paving of existing roads and lanes and construction of new roads and lanes

    (iv) providing street lighting

    (v) cutting filling and landscaping the area, including horticultural operations and

    (vi) partial development of the slum area with a view to provide land for unremunerative purpose such as parks, playgrounds, welfare and community centres police stations fire stations and schools hospitals dispensaries, etc run on non profit basis

Scheme for the removal of jhuggis and jhonpris in Delhi

This scheme approved by the Government of India in 1960 envisaged allotment of open developed plots to squatters on their removal from the present site of occupancy The scheme applied only to New Delhi. The plots were given on lease for 99 years on their paying the cost (subsidized to the extent of 50 per cent) in a lump sum or in ten yearly instalments

Achievements and the Underlying Policy

All these above-mentioned schemes are termed as urban social housing schemes Over 5 lakh houses had been constructed by 1975 under the social housing schemes excluding slum clearance and improvement schemes The following table 7 3 shows the progress up to June 1975

In addition to these schemes the government has been encouraging private building construction by giving loans through banks provident funds and the LIC It has also been encouraging experimentation in low cost housing techniques

The most affected ones, as in any case were the poor A number of low cost techniques had been evolved in the past, but few of them have been in use The problem of urban housing at present is not something of a technical nature, however, but fundamentally one of poverty First of all, there are not enough funds with the government to be diverted to housing in the face of other pressing problems Secondly, the urban poor—the squatterant dwellers, slum dwellers and pavement dwellers—do not have the minimum assured income to pay for even the lowest cost housing available Thirdly, the pattern of urban

development has also placed the poor in a disadvantageous position to have a better place in peripheral areas for it involves very high transportation costs and other inconveniences Fourthly, the government programmes have also been biased against organising the mite of the poor to find solutions for themselves Fifthly, a lot of investable funds, material and labour have been diverted to the construction of luxury houses and apartments Until recently government did nothing in this respect.

Table 7.3   Social housing in India

Scheme	Dwelling units 30th June, 1975
A State Sector	
1 Integrated Subs dized Housing Scheme for Industrial Workers and Economically Weaker Sections of the Community	1 82,233
2 Low Income Group Housing Scheme	2 44 009
3 Middle Income Group Housing Scheme	34,322
4 Rental Housing Scheme for State Government Employees	23 701
5 Land Acquisition and Development Scheme Land Acquired Land Developed	26,925
6 Slum Clearance/Improvement Scheme	95 812
7 Subs dized Housing Scheme for Plantation Workers	4 085
B Central Sector	
8 (a) Expenditure incurred on Central Scheme for Environmental Improvement in Slum areas	Rs. 164 9 mill on
(b) Projects sanct oned	Rs. 246.0 „
9 Jhuggi and Jhonpri Removal Scheme (Plots/ Tenements)	59 048 (September 1975)

Source   Min stry of Works Housing and Urban Development
December 1975

Because of the very low priority given to housing in national plans there were not enough funds for public housing and the policy has been to encourage private production except in the case of the low income population. It is understandable consi-

the situation that prevails in the country, but with proper intervention and a clear policy private investments in housing could have been beneficially utilized for many more

The policy and programmes hitherto and even now have been suffering from quantity orientation and middle class values No doubt quantitative shortage is the first thing we have to strive to bridge, but the unimaginative ways in which this was meant to be done had in fact led to more unhealthy housing developments Cost was the major consideration in most of the poor income subsidized housing schemes This cost reduction was attempted in the past with a costly techno logy in view Opportunity cost of housing replacement was never worked out and therefore permanance (for ever!) of structure was considered the most important element Conse quently most houses produced in this category were small hovels designed without any consideration for the life style and requirements of the people concerned Many experiments outside the governmental programmes show that cost reduction is possible without really decreasing the quality This requires allowing for a change in the structural standards prescribed in the building manuals made 50 years or more ago It is also possible to reduce cost of housing by careful planning and design of layouts Land and development costs happen to be major factors of cost It is common that most low income housing layouts are prepared with middle class values and needs in view and almost 50 per cent of the land in such layouts goes for roads Access to houses is no doubt needed, but it is important to note that low income people who are given a house of just a room and less than 30 sq m of area will not have a car Roads and circulation patterns are planned in such a way that when these poor people are paying even for the wastage of space on roads such spaces are used by others who have cars The unfortunate ones are left with no open space either within their plot nor are they allowed to use the street as a social space It is possible to change these situations only if we change our antiquated bye laws and planning ideologies

A major drawback of the housing policy has been that housing has been considered as a sector in isolation A concept of planning for 'total housing including shelter, infrastructure and services was never evolved This is partly because housing

Fig 10

Low Cost Housing Design for EWS

HOUSING SYSTEM FOR ECONOMICALLY WEAKER SECTION

Designed by Institute of Development Studies, Mysore for the Mysore Municipal Corporation.

PART OF A LAY OUT AT BANNI MANTAP MYSORE

Hierarchy & considerations processed at a variety of systems of various levels, of a hierarchy of human expression, the family, the local community, the neighbourhood and so if & half put de factor of a proper scale has evolved at an environment.

is an area of *ad hoc* and residual investments in the national priorities The central government has never taken any interest in housing other than mere funding and a few schemes, and the housing sector was left to state governments The state governments have never had enough funds Anyhow, both state and centre are far removed from the people and the local authorities who have the local interests and therefore closer to people had nothing to do with any of these things The bureaucratic bodies which were created for the purposes of looking after housing and infrastructure etc, were too numerous and had an extremely narrow framework of action and large areas to cover The housing boards slum clearance, water supply and sewerage boards, electricity boards etc, have no common interest nor is there any common policy to bind them all in respect to the provision of housing and services It is no wonder then that a concept of total housing never evolved in India

The building industry also did not get adequate attention This is one industry in India, which uses both traditional and sophisticated techniques simultaneously, especially in the urban areas It is also one of the ill-organised industries of the urban areas exploiting the low paid labour, millions of migrants for employment opportunities which could be fruitfully generated in this sector were never taken note of The government also did not channelise or make use of the self supporting production systems of the poorest section like slum dwellers and squatment dwellers whose productions fall completely outside the 'building industry' in India

The new Janata government recognises the importance of construction activity as a means of large employment and a stimulant for industrial growth It proposes to encourage private construction and co operative ventures and restrict the construction of luxury houses The economic policy statement of the Janata Party has the following to say

Constructional activity like laying of new railway lines irrigation, road building and housing has a very large employment potential This activity is also important from the point of view of social needs It will incidentally stimulate the latent demand of steel and other materials for which the demand is at present very slack *All restrictions on house*

Fig 11
Type Design for a Dwelling Unit

SECTION ON A-A

PLAN OF A UNIT

building must therefore be removed and individual initiative and cooperative endeavour must be given full play to meet this pressing social need People induced to save the invest in the housing construction (sic) Encouragement must be given to house building activities of the common people and also house building activities for the common people However construction of lavish and luxury flats should not be allowed At the same time production of cement and other building material like bricks, mortar, etc should be rapidly increased so that shortages and black markets do not reappear Public authorities should give special priority to construction of houses for economically and socially backward, including Harijans and Adivasis [2] (italics ours)*

The Sixth Plan of the Janata Government however, has not moved much from the previous position except that it included in its objectives,

Provision by the state of some of the basic needs of the people in the poorest sections of society like clean drinking water, adult literacy, elementary education health care, rural roads, rural housing for landless and minimum service for the urban slums [6]

About 13 per cent of the total outlay goes to services in which the share of urban and rural housing including urban development and other related services would be around 6 per cent a little more than the previous plan allocation There might be many arguments on economic grounds for such low allocation to housing in the public sector, but services and even low income housing cannot take care of themselves by private investment alone The urban housing objectives of the Sixth Plan are the self help housing, public sector social housing within the paying capacity of the weaker sections and strengthening of institutions like HUDCO for housing by private agencies Over 2 million units are targeted to be built by the state or its agencies in the next 5 years Eightyfive per cent of this will be for weaker sections

This is in a welcome direction but it is necessary that more comprehensive and integrated programmes are formulated

within a total housing policy in the absence of which all the Plan statements would remain grossly inadequate and ineffective. A rather disquieting feature of the Janata proposals are those relating to the 'laissez faire' approach to building production. The government's anxiety to encourage private building production is understandable, but its bid for capitalistic expansion of the building industry has to generate concern. In this process urban property ceilings and rent controls are looked upon as evils. Rent controls in the past did not work properly, it is true, and the urban property ceiling might have affected the urban building industry also but these are not excuses to let loose the speculators to hoard the most valuable urban land. Moreover, uncontrolled private housing will not ease the housing market for the low income population in any way. It might affect them adversely. In fact, there is an urgent need for severe social controls in the speculation, trade and production of built environments in urban areas especially in the over-congested large cities. As mentioned earlier *a lot* of private money goes into the production of *too little* number of units which in turn try to squeeze out *too high* rents in some urban centres. Most of these investments go into housing simply because public money is available to the privileged influential ones—government servants, salaried personnel etc—from the credit institutions and these investors have no other channel of large investments free of control where capital appreciates year after year and offers little management problems. It is possible for the government to channelise and control these *investments without impairing the production*. It needs imaginative programmes. An uncontrolled development is very unhealthy. Rethinking is needed in this area also with a more detailed analysis of the private housing development and rental business in the past.

Urban Infrastructure

In the area of urban infrastructure also, there has been no clear cut policy in the past nor is there any at present except that the present government gives higher priority to smaller and medium sized cities over metropolitan ones. Decisions were taken on an *ad hoc* basis whenever problems became quite

serious in a city Most of the urban infrastructure facilities have suffered because of this lack of policy. The provision of infrastructure facilities was the responsibility of the state, but most states did not have adequate funds to tackle the problem As a result, those cities— especially metropolitan cities—whose problems became critically worse could only attract some attention

With respect to transport, all the major cities are in a critical state except probably Delhi and Bombay to some extent. Transportation planning and mass transit development have been attempted in all the million cities and in some other major cities. These planning studies were sponsored by the Planning Commission in some cases state governments in some others, and other agencies like the World Bank in yet others However, there are some serious problems in the implementation of these plans For example, if Madras city plans for a railway transit system it may not come through as the implementation is controlled by the railway budget prepared by the Railway Ministry at the centre By and large, therefore, these cities have to depend on road transport. The road transport in the Indian cities including the metropolitan ones has been one of mixed modes including autorickshaws, cycles, taxis, buses bullock carts and other animal drawn carts Planning in such situations requires ingenious models and the application of western techniques can result only in confusion and failure This also points out to the need for a policy decision at a higher level

One transportation policy which most states have been trying out is the nationalisation of urban mass transport. However, this has not led to improvement in the situation or economy in any substantial manner in most cases

With respect to drinking water supply and waste disposal, the situation is worse than that of transportation The present policy followed by most governments serves mainly the upper class and the poor people are the worst sufferers There is no city in India where the water supply is adequate and the environmental sanitation satisfactory One programme of the past which tried to help the poor in this regard was the environmental improvement scheme in the slum areas. Under this scheme water taps and drainage facilities, latrines, sewerages were provided The WHO in a report said

Trained manpower skills have been developed within the country to an optimum level reaching an exportable surplus in certain engineering disciplines, self sufficiency in materials and equipment has been attained, an information system has been established as a credible aid to planning, research and development have been initiated to improve methods of planning and implementation, community water supply and sanitation has gained higher priority after an initial period of misplaced emphasis on curative medicine

Even so, achievement in basic sanitary measures is not strong enough to underwrite community health Internal funding is unable to match the needs of a massive programme rendered increasingly urgent by past neglect In the fifties and the sixties progress was slow. Financing methods, rate setting policies and lukewarm community participation have hindered the flow of external aid which, in its turn, was bound by rigid economic criteria out of tune with the needs and problems of the developing countries During the current decade, however, progress has been markedly accelerated Changing concepts on priority and funding within the country and a more realistic application of economic principles by external funding agencies have helped "

It further added that

The urban population served by water supply through house connections was 42 per cent in 1970 and 56 per cent in 1975, through public stand posts it was 18 per cent in 1970 and 24 per cent in 1975 The coverage under the public sewer system was 36 per cent in 1970 and 34 per cent in 1975 under household systems, excluding bucket systems it was 19 per cent in 1970 and 13 per cent in 1975 Excreta disposal by the conservancy system (bucket) was as much as 36 per cent in 1970 and 34 per cent in 1975 of the urban population was being served It would seem as if bucket privies, however obnoxious, get perpetuated as a necessary evil (a) because they help the house-owner avoid the one-time investment on a sanitary waterseal privy, and (b) why the local authority postpone a sewer system In short, an

entrenched conservancy system can operate as a *disincentive to sanitary improvement*

However, it is to be noted that there was a thirty fold increase in the sectoral outlay as against an eight fold increase in the plan outlays between the First and Fourth Plans The Fifth Plan allocated almost double the Fourth Plan provision Nonetheless, to reach the target of the second development decade in the urban water supply and sewage disposal alone, more than double the investment would be needed The Fifth Plan envisaged complete coverage of the urban water supply phase, nonetheless The achievement of the plan is far short of expectations The Sixth Plan allocation is more than double that of the Fifth Plan, but percentage-wise the share has remained more or less the same One problem connected with water supply to urban areas is that unless it is supplemented by programmes for removal of waste water it can create very difficult sanitary conditions and our sanitation and drainage programmes are much too deficient

The position regarding electricity is a similar story Many urban houses especially in the slums and those of the low income people do not have this facility though it is available at their door step Services like gas etc are mostly luxury services in most urban areas and the poor live mainly with traditional fuels when no Plan provides for Most of these services even when available are too costly for the poor The pricing policy has been in favour of the rich

What is lacking *in the provision of essential infrastructure facilities in urban areas is a clear policy which would help*

(a) in fixing priorities and choosing areas for immediate action, and

(b) in facilitating the various agencies dealing with different aspects of infrastructure in evolving a pricing system which would ensure that the poor *do not subsidize the rich as well* as ensure that the rich are taxed for overconsumption

Urban Services

Urban services like educational facilities, medical facilities, post and telegraph facilities and telephone facilities have been planned in the past without much of a criteria or policy in

regard to their location or priority More often, the bargaining power of the local politicians and leaders and the class of residents have played important roles in the development of these services Though urban centres are generally more favourably placed in regard to these services, compared to rural areas, most of these facilities such as medical facilities serve the rural areas as well The urban areas, however, do not have any preferential treatment with respect to their pricing

As educational and medical services are state subjects differences exist between states with regard to programmes, systems as well as the levels of achievement However, education up to secondary level and reasonable medical facilities are free in all the states and education is compulsory up to primary stage, but the system is not tuned to achieve this end even in the urban areas It is also to be noted that there are many better class's of schools, colleges and medical facilities which can only be afforded by higher classes or the elite due to their type of services and costs The educational services in India, have been criticized for churning out different classes of citizens What is more, even when these urban services are available, the management system as to the design, location and administration of these services is such that they favour mostly the middle and upper income groups The location of most of these services is usually further away from designated localities and often not accessible to urban slums It is also noted by many studies that certain services like education and health are not designed to the needs and aspirations of the poor and their utilisation by the poor is relatively low There are quite a few planners now who recommend rethinking in the design of the delivery of these urban services Yet, there is no substantial change in the concept or policy regarding social services in the urban areas There is some change in the policy regarding rural areas, which will be discussed later

RURAL SYSTEMS POLICY

Shelter

Rural housing is a neglected field It made a humble beginning in the first Five Year Plan Even in the subsequent plan it

did not receive much attention and only small percentages were spent of the meagre sum allotted Schemes were linked with community development projects, such as provision of water supply roads drainage public health, education etc At the centre a rural housing cell was created in the second plan period to study various problems in the field and to evolve better designs layouts and methods of construction and better utilisation of local materials From the third Five Year Plan onwards there are two schemes

Village housing and planning This scheme provides loans for selected villages in groups of four to six for preparation of layout plans after carrying out physical and socio economic surveys The implementation of the layout plans and rebuilding of houses are to be taken up in stages so that the entire village is remodelled over a period of 8 to 10 years The scheme did not make much progress as it was not related to the reality of available institutional arrangements

Under the same scheme *assistance in the shape of loans up to two-thirds of the cost of construction subject to a maximum of Rs 2 000 per house is given for building of houses* The scheme also provides for acquisition of lands required for roads, community buildings new house sites and redensification

The programme gives priority to Harijans, agricultural workers and to those sections of the community whose housing conditions are especially deplorable Up to 30 June 1975, 59 659 dwelling units were constructed under this scheme

House sites for agricultural workers In congested villages land required for village extension was to be acquired and given to landless agricultural labourers under this scheme State governments are assisting in securing sites

No prescribed standards as such were stipulated Semi detached houses with back to back arrangement avoiding service lanes were suggested suitable for villages and a density of 25 to 38 houses per hectare was recommended The width of the plots for semidetached houses should be sufficient enough to allow for a side passage for cattle A depth of 27 metres for plots was considered desirable for keeping cattle sheds away from the house

Under the 20-point programme of the Government of India, special attention was given to the provision of house sites for

between town and country, but pledges itself to initiate a comprehensive new village movement and promote rural growth centres. The new village movement, we envisage, will bring new life, hope and dignity to rural India seen as viable communities of functional rural clusters with improved dwellings, clean water and modern sanitation. Privation, dirt, drudgery and debt habit will be no more. The new village will be open to science and technology. It will have live democratic institutions in its panchayats, youth clubs and mahila mardals and facilities for recreation and entertainment.

This statement is rather utopian, but indicates the new thinking. The approach to rural housing of the present government could be found in the following words of Sikandar Bakht, the present Union Minister for Works and Housing.

Development of rural areas calls for new innovations and creative thinking. There has to be a departure from the old concept of according low priority to rural housing. It is also to be borne in mind that urban oriented technology, systems of financing and institutional framework will not work in rural areas where agricultural and allied professions predominate.[9]

The importance of political mobilisation and co-operative housing is also being stressed.

In the rural areas, there is no dearth of labour force because it is testified by the existence of unemployment or underemployment. Our aim should be to canalise this labour force to a programme of self help restricting the aid to the barest minimum. With the progressive increase in the economic level of the rural population, the Government should frame schemes to mobilise their savings for investment in housing. The spirit of co-operative effort and the infusing of 'mutual self help and' may be induced in them.[10]

The Basic Minimum Needs Programme

The basic minimum needs programme is a package pro-

gramme of services to rural areas initiated during the Fifth Plan.
It included education, health, nutrition, drinking water, provi-
sion of house sites, rural roads and rural electrification. The
national BMN programme of the Fifth Plan had the following
objectives

 (i) the provision of facilities for elementary education for
     children up to the age of 14 years at the nearest possible
     places to their homes ;

 (ii) ensuring in all areas a minimum uniform availability
      of public health facilities, which would include preventive
      medicine, family planning, nutrition and the detection of
      early morbidity and adequate arrangements for referring
      serious cases to an appropriate higher echelon;

 (iii) supplying drinking water to villages suffering from
       chronic scarcity of having unsafe source of water;

 (iv) provision of all weather roads to all villages having a
      population of 1500 persons or more, this minimum
      need conceived of as for a cluster of villages in the case
      of hilly, tribal and coastal areas,

 (v) provision of developed home sites for landless labour
     in rural areas.

 (vi) ensuring the spread of electrification to cover 40 per
      cent of the rural population.

These programmes are continued with more vigour under
the new government. The BMN programmes at present try to
cover more villages. One of the areas which requires urgent
attention is rural water supply The WHO report cited elsewhere
in this chapter adds

Rural water supply may be viewed in a different perspective.
The country's own strategy for rural water supply coverage
is the 'worst first' approach The plan is to cover the
scarcity and problem health areas in their entirety first, and
leave improvement of existing services in the other rural
communities to a subsequent stage. The earlier plan provi-
sions (particularly under the state budgets) had been
expended mostly in providing water supply in the compara-
tively easier rural areas. Conservatively a majority of the

rural communities other than those in the problem areas of
the Government's Minimum Needs Programme, have
reasonable access to water which may not be 'safe' Never-
theless, the scale of investment, needed to render this water
safe should be much smaller than if it had to be provided
anew This may have validity in estimating future commit-
ments [31]

The new government proposes to make pure drinking water
available to all villages within the next five years [32] It is said
that

> Government have already begun working on a compre-
> hensive plan to provide pure and healthy drinking water
> to all villages in the country on a time bound basis The pro
> gramme would be launched soon [33]

The Sixth Plan has an ambitious programme as given in
Table 7 4

A special mention must be made about rural health and edu
cation services because lots of talk is going on about these two in
the country at present The situation regarding the rural health
and education had been worse compared to urban areas The
traditional policy hitherto concentrated on a type and structure
of education and health system which had no relation to the
socio-economic realities of the villages Moreover, emphasis used
to be placed on hardware developments such as schools clinics,
benches beds, dispensaries and quarters, while the software
aspects of system design to suit the local needs were neglected
There was no policy also regarding the location of such services.
The rural health programmes were especially concentrated on
curative aspects rather than preventive measures No doubt
there were a few programmes for the eradication of epidemic
diseases, but there was no programme for family health care in
the rural areas The present thinking is conducive to a re
evaluation of the past programmes Regarding health the Janata
Party manifesto stated

> The Party will devote special attention to providing health
> facilities to the rural areas and all vulnerable sections of the

Table 7.4 · Fifth Plan and revised minimum needs norms

Head	Fifth plan norms	Revised norms achieved by 1988
Elementary education	Coverage of 97% of children in age-group 6-11 and 47% of children in age group 11,14.	100% coverage of children in age-group 6-14 (90% coverage by 1983) half of additional enrolment in the non formal system
Adult education		Coverage of all adults in age-group 15-35. Coverage in next five years to be determined on the basis of field experience and suitably enlarged.
Rural health	Establishment of one PHC per each community development block Establishment of one sub-centre for every 10,000 population Provision of drugs @ Rs 12,000 per annum for each PHC and Rs 2,000 per annum for each sub-centre	Establishment of one PHC for every 50,000 population and one sub-centre for every 5,000 population. One community health worker in each village.
Rural water supply	Coverage of all the problem villages	Coverage of all leftover problem villages by 1993
Rural roads	Linking up of all Villages with a population of 1,500 or more	Linking up of all villages with a population of 1,000 or more
Rural electrification	Assistance to only those States which have not achieved 40% coverage by the end of the Fourth Plan	Coverage of 50% of villages in each State and Union Territory

Sites and other help for housing landless rural labour households	Provision of nearly 4 million house-sites.	Provision of housing assistance to all rural landless labour households
Environmental improvement of urban slums	Financial assistance to States for (a) Expansion of water supply, (b) sewerage, (c) paving of streets, and (d) provision of community latrines in slum areas which are not likely to be cleared within next 10 years, but are amenable to improvement. The scheme will be extended to all towns with a population of 3 lakhs and above. Where a town of this size does not exist one town from each such State would be covered. Area inhabited by scheduled castes particularly scavengers etc. should be given due priority	Environmental improvement comprehending (a) expansion of water supply, (b) sewerage, (c) paving of streets, and (d) provision of community latrines in slum areas, particularly scavengers etc. should be given due priority
Nutrition	1 Mid-day meals for children in age-group 6-11 years. 2 Supplementary feeding programme for children in the age group 0-6, pregnant women and lactating mothers in tribal areas, urban slums and chronically drought prone areas.	1. Mid-day meals for one fourth of children in age-group 6-11 years 2 Supplementary feeding programme for undernourished children in the age-group 0-6 pregnant women and nursing mothers in blocks with high concentration of scheduled castes and tribes

population including the urban poor It will attempt to *bring simple medical aid within the reach of every citizen* by organising a cadre of medical, para medical and community health workers among whom trained practitioners of indigenous system of medicine will be a part. The party will attempt progressively to improve the quality of the contributory health insurance scheme and extend its coverage to all those who are in employment. The possibility of supplementing this with group health insurance schemes for rural communities will be explored

To implement such a scheme within the resources, the traditional systems of medicine are given more importance. A rural health care and family welfare programme with barefoot doctors is also being planned. Family planning is also linked to *this family welfare programme*

On the side of education the Janata manifesto promised that education up to middle level would be provided to all within the next twelve years. It also promised reforms in the educational structure to allow for non formal continuing as well as formal education with the accent on functional content in the curricula related to the lives and environment of the people. It promised to remove illiteracy within five years. However, very little has been happening in this field except talks talks and talks

Transport and communications in the rural areas have been developing in the past without much of a policy or plan. The transportation needs of the rural areas have been satisfied by the bullock carts by and large. A few years back it was estimated that the total investment on bullock carts in India was next only to railways. The bullock cart then emerged as a national hero and a number of research and popularisation attempts followed. However the futility of these attempts is now understood by most. The ruralite does not lack behind much in his capacity to innovate, but he lacks initiative finances and entrepreneurship which the urban technological researchers can rarely substitute. What is needed by most villagers in India is not an improved design of the bullock cart but money to buy a pair of bullocks. The rural transportation programme does not need as much technological input as is being thought of but other economic and physical inputs such as credit and better roads. This seems to

have been understood by policy makers as there has been no talk of bullock carts recently

Rural housing transport and communications development, nonetheless face this question in the final analysis 'what would be policy and pattern of human settlement development in the future' Is this our aim to produce two classes of citizens, one with access to all modern facilities and technological products and the other to depend on traditional or improved techniques and be satisfied' Or else, will the planners, policy makers and leaders of India have the courage to see that no double standard is perpetuated'

To Sum Up

From the discussion above, we have seen that the shelter, infrastructure and services programmes at present are independent of each other All these together form the most physical manmade part of human habitat and are related to each other very closely Is it not necessary then that they are integrated, so that we would be able to achieve a higher degree of effectiveness? The basic minimum programme is the first step in this direction Though these programmes try to assemble them together for a settlement it is still not a package programme and the household approach is absent Each component of the programme is treated separately and the programme is dealt mostly at the village level What is needed is to identify the most needy households and see that all their basic needs are satisfied as a package This has to fit within the overall settlements policies of the country as a whole Working on statistical averages may not give the desired results and working on local levels requires a different set of institutions than those we have at present Though the efforts in this direction are welcome, it is difficult to ensure that these programmes as they are at present will reach the needy This problem is also connected with the phenomenon of social stratification in the rural as well as urban areas

Secondly, the basic needs programme cannot be considered as a one shot affair in such a way that house-sites or water taps or a minimal house or a road is provided to a household or group of households or a village and then forgotten completely

For the programme to be meaningful, it should not be based on such dole outs at all. It should be a programme of self-help with the aid of appropriate agencies which results in the standard of habitat provisions—shelter, services etc.—improving continuously and progressively. Launching a programme without such a vision to show that something is being done is of no significance if not of negative impact in the long run.

Fig 12
People's Housing Scheme

elevation

plan
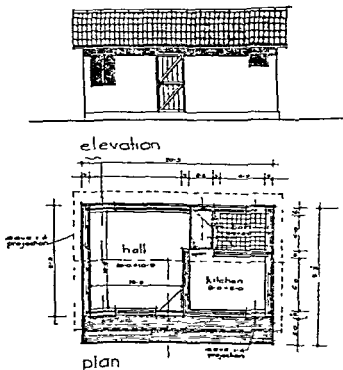
ONE OF THE PROTOTYPE DESIGNS For
PEOPLE'S HOUSING SCHEME,KARNATAKA
Mud wolls with split bamboo reinforcement country
tiles roofing(improved trad'tional techniques)

Source People's Housing Scheme Govt of Karnataka

We might be making more and more people dependent on officialdom and bureaucracy Social and political mobilization should be an essential feature of these programmes to ensure that the programme may not fall into such traps People should be able to get their rights and not dole outs

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8

Resources and Technology

A RESOURCE management and technology policy for India should take into account the following facts

1 The fruits of modern technology reach only a tiny proportion of the people

2 The disparity between people and areas is appallingly high

3 If the majority of the people raise their consumption level of technological products to the level of privileged ones, the country's resources and the population will be of no match to each other even at present, not to speak of the future

4 Ecological disturbances and environmental changes are already visible even in the present level of technological development

5 Traditional India is not devoid of a technology of its own which has potential

6 The strength of the nation is its people, who can work and who need work

These considerations agitated the mind of Gandhi as far back as the 1940s What he gave out as a basic philosophy of Indian life was humble in approach modest and within the reach of even the lowliest His was a package programme based on two principles namely, truth and nonviolence He saw the future of India in the villages and in the hundreds and thousands of hands of youthful Indians and not in cities and in machines. Speed artificial speed he hated He wrote

> Extinction of village industries would complete the ruin of the 7 00 000 villages of India Mechanisation is good when the hands are too few for the work intended to be

accomplished It is an evil where there are more hands than required for the work, as is the case in India the way to take work to the villagers is not through mechanisation but that it lies through revival of the industries they have hitherto followed [3]

Gandhi was not against industrialization *per se* He, however, wanted the size of industries to be within manageable limits

As a moderately intelligent man, I know that man cannot live without industry Therefore, I cannot be opposed to industrialization But I have a great concern in introducing machine industry The machine produces much too fast and brings with it a sort of economic system that I cannot grasp I do not want to accept something when I see that its evil effects outweigh whatever good it brings with it I want the dumb millions in our land to be healthy and happy I want them to grow spiritually As yet, for this purpose we do not need the machine. There are too many idle hands But as we grow in understanding, if we feel the need for machines we certainly have them, once we have shaped our life on Ahimsa, we shall know how to control the machine [2]

Gandhi wrote all this much before the idea of intermediate technology was mooted in the West However, Gandhi's teachings made little impact in the technology policies of post independent India. No doubt Gandhi's ideas are unpractical unless taken in its package form covering all walks of life Superficial simplicity will not be of any help A set of village industries to produce local utensils and clothes would not go with the sophisticated powerlooms competing *from the city* with all its glamour and so called marketing techniques A plough is certainly incongruous with the tractor unless we marry them properly Reinforced cement concrete and country tiles are no match for each other

The technology policy that followed immediately was developed by a set of the elite who were attracted to the technological achievements of the West Naturally India went in for large scale borrowing of technological know how and built up a huge

infrastructure for research and development No doubt today India can boast of a giant industrial superstructure which is at the top among the developing nations and also competes with the developed nations in certain areas It has produced one-fifth of the total scientists and technologists in the world Ironically, it now exports many of them as they cannot find jobs here

The pertinent question still remains what is the relevance of this technological development in India? This question had been increasingly raised in many forms in the recent past. The idea of appropriate technology now, has come from the West and has therefore become more credible This has also increased the momentum of thinking in this direction. A few more things have happened The energy problem which is at the base of modern technology loomed large over the Indian horizon during the oil crisis A lot of studies revealed recently that in spite of the achievements in science and technology a majority of Indians still live and produce with the traditional technology More than half of the houses are being built with this technology and more than half of agricultural production uses this technology More than half of the hearths glow with this technology, and more than half of the houses are lit with this technology It has also been increasingly noted that the environmental deterioration and resource depletion is also quite fast The politics in India was also changing and the rural areas were becoming full of discontent and unrest Politicians and bureaucrats foresee the development and know that the rural areas matter a lot at least for their continuance in power

A change in emphasis followed with more accent on the rural Though many of India's administrators intelligentsia and politicians were either not convinced or opposed to this what they called retrogressive step the rhetoric and the rural band wagon did pervade among the administrative and political cadre A lot of symbolic research went in the name of appropriate technology such as bullock cart development, low cost housing techniques solar cookers etc However all these may be considered psuedo-scientific technocratic research where the prospective user the ruralite was not consulted about what he needed The mood of Indian technology policy recently could be found in the following statement

In the past, Indian science was burdened with colonial paradigms In more recent years it has been influenced by the United States and the USSR, especially in the areas of atomic energy, defence and industrial research What the country needs is a policy of genuine self reliance and non-reliance on the advanced nations This does not rule out a policy of exchanges with other third world nations. Tanzania and Vietnam, for example, and China too, have gone through the painful experience of transforming a traditionalist feudal system into a more just social order They have succeeded in implementing a rural biased and science-oriented social education policy The government will be well advised to adopt an open minded policy towards these and other developing societies [3]

However, there are many who doubt the futility of the purely technocratic approach and the extremist points of view It is to be understood that what the people need and expect cannot be substituted by wishful thinking Secondly, even the advocates of Chinese models do forget the socio-political frame in which such technologic change was possible As long as the foundation of the past action remains this extremist view of appropriate technology or low energy technology or what ever one may call, its can do only harm and further accentuate the dualism already present in Indian society The technological situation available in India at present is clearly opposition to this dualism and if India wants a change it has to first attack the existing socio technic structure rather than promoting symbolic schemes, this group argues What is clear about the present situation in India in relation to technology policy is that there is an utter confusion rooted in the present shrewdedness regarding the political, economic and cultural philosophy Every one agrees on one point however, that the science policy resolution passed by the Indian parliament requires rethinking

The Janata Party added its own share to the confusion Its election manifesto stated

Janata Party wants the benefits of science and technology to reach all our people It is not opposed to advanced technology, but it firmly believes that this can be harnessed to our

needs only if we employ appropriate technology—simple or sophisticated—that is compatible with environment and while maximizing employment will yield optimum socio-economic benefits in the circumstances that prevail in our country The party will, therefore, review industrial and locational policies to derive the fullest advantage from the choice of appropriate technology in different sectors Appropriate technology is a means of promoting individual and community self reliance through a *swadeshi* movement

The debate on technology is a never ending one, but the social process of assimilation and rejection will continue irrespective of any decision But, obscure visions of any nature can blight the future Within the above situation regarding technology we shall look at the present trends in a few areas which are important from the point of view of human settlements The areas where changes in policy appeared in India are (i) energy (ii) housing (iii) transport, (iv) water supply and sanitation (v) rural industrialisation

Energy

According to one of the estimates the energy requirement by A D 2000 would be almost 10 times the requirements of 1970-71 The estimates (under different assumptions) of different types of energies as projected by the fuel policy committee is given below

These estimates are enough to shock the energy planners of the country Added to this the consumption of non commercial fuel is at present high and is not likely to change drastically in the near future This may have serious repercussions. The oil crisis with the increase in price for petroleum products was particularly painful to India The consumption of petroleum in India constitutes only one per cent of the total world production and two thirds of this oil is imported. India's energy policy so far has placed undue emphasis on nuclear power The problem connected with this is quite well known and there is also a shortage of nuclear fuel in India.

These considerations have prompted a shift of emphasis and have given rise to certain policies in the energy sector The

present trends in the energy policy could be summarised as follows

(i) reduction in the use of oil and increase in the use of coal,

(ii) development of alternative sources of energy like solar energy, biogas energy especially for rural and domestic consumption,

(iii) developing renewable hydro power sources as well as establishing nuclear power stations.

(iv) to develop a national power grid so as to utilize the surplus power in some places in scarcity areas

(v) to increase the efficiency of energy utilisation

Table 8 1 · Estimated requirements of fuels (in original units)

	Coal 10⁶ tonnes*	Oil 10⁶ tonnes*	Electricity 10⁹ kwh	Fire wood 10⁶ tonnes	Animal dung 10⁶ tonnes	Agricultural wastes 10⁶ tonnes
1970-71	68	18	56	123	67	38
Case (a)						
1978-79	135	34	120	132	65	46
1983-84	201	43	200	131	65	46
1990-91	338	77	385	122	53	46
2000-01	600	145	670	89	40	46
Case (b)						
1978-79	146	30	128	132	65	46
1983-84	218	39	211	131	65	46
1990-91	365	57	398	122	53	46
2000-01	650	97	700	89	40	46

* Including coal and oil used in generating electricity and non-energy sector

Source Kirit Parikh Energy, second Ind z Studies The Macmillan Company of India Ltd 1976

The domestic use of energy for cooking and light accounts for about 57 per cent of the total energy consumption Of this,

about 47 per cent comes from "non-commercial" sources, such
as firewood, dung cakes, etc Rural electrification has never
been a success in many parts with respect to cost as well as
utility. At the present high rate of consumption, this may pose
a serious threat to the forests and general ecological balance,
and some alternatives such as gobar gas must be developed.
Also the planting of 'social forests' with fast growing wood
is being considered Nonetheless, the actions and research in
the area of 'energy for human settlements' is too meagre indeed
at present

Housing Technology

The rural as well as the urban housing industry has received
little attention in the past No doubt there has been a few tech-
nological researchers, and a few improved designs and construc
tion techniques, but there had been little effort in organising and
supporting the building industry which is by and large in the
informal sector

The "informal sector" is responsible for almost all the
housing in rural and smaller towns In the cities also, the bulk
of the housing is constructed by individual owners, generally
financed by themselves Two-thirds of the population build
their own housing The National Building Organisation and
other agencies help in various ways, mostly by providing infor-
mation to the owner builders But this still remains grossly
inadequate

The formal sector of the building industry— the organised
contractors etc., are very much under the influence of western
methods and models Perhaps it is true that modern sky-scra
pers cannot be built by traditional methods However, it is
possible to marry advanced architectural and design techniques
for buildings to indigenous building materials of relatively low
cost and manufacturing inputs which use traditional building
craftsmen That such a marriage is possible is demonstrated by
the works of a few experimenters such as Laurie Baker, an
England born architect who has lived in India for most of his
professional career He has evolved techniques and designs
that are not only economical, use local materials and skills,
but are also extremely felicitous, pleasant to live and work in,

embodying as they do simplicity and elegance, comfort with utility

Unfortunately, despite the attention that he has gained from various sources, and the publicity that he occasionally receives, the work of Laurie Baker and a few others remains largely isolated and has not culminated in any kind of a movement Perhaps the reasons for the neglect of their work are two fold In the first place, they are experimental and hence for all those who go by the usual norms and standardized techniques and methods, it involves a certain kind of risk at least at the psychological level It requires independent thinking, planning, and self-confidence, on the part of the clients At the same time, it requires continued supervision on the part of the innovators during the process of construction, which has not been standardized and made sufficiently common to be carried out by the builders and construction workers independently This would require a far more widespread effort than the work of a few

A few encouraging experiments that are going on in the housing field are the Janata Housing Scheme in Karnataka and other states and the one lakh housing scheme in Kerala All these projects have used local techniques and local materials and are quite appropriate and liveable [4] Other developments in the field of the building industry are the mini cement plants and other building material manufacturing techniques The following report suggests one of the possibilities in this field

A conventional ball mill—a rotating cylinder with steel balls in it—is being used in the remote Indian village of Atarra, Uttar Pradesh to produce a rich black cement from rice husk and lime The black cement is not only architecturally attractive but also structurally as strong as portland cement

The Indian plant has been set up at an astonishingly low cost of $ 2,900 and produces about 250 tonnes of cement each year This is enough to meet the present demands of 15 surrounding villages with a total population of about 7,500 people

Cement production village style, consists of two simple steps First the ash of rice husks is mixed with lime Then

this mixture is ground in a ball mill for a few hours until it becomes a fine black cement. The process has been developed by Dr P C. Kapur, a metallurgist working at the Indian Institute of Technology, Kanpur. The rice husk ash used in the process is the waste left over after rice millers have used rice husk to fire their boilers.[6]

Similar cement plants are also being worked out by the Tamil Nadu State Industrial Development Corporation, the Planning Research and Action Institute, etc. Prototypes have been in operation. The Cement Research Institute, New Delhi, has established the technological feasibility of mini cement plants. These plants are supposed not only to increase the employment opportunities in rural areas but also decrease cost of construction.

The following report suggests further possibilities and thinking in this field.

The National Committee on Science and Technology Panel on Housing Urbanization and Construction Technology has identified some major agricultural wastes with high potential of utilization as building materials along with the required research and development inputs. These are rice husk, waste lime sludge available from sugar, paper, tannery, acetylene gas and fertilizer industries, saw dust, rice straw, wheat straw, corn cob corn stalk reeds and bagasse. Agro industrial wastes like coconut husk, coir fibre and paddy straw have also been identified for utilization in construction technology.

The Central Building Research Institute Roorkee has already developed two processes for converting rice husk into use for building materials particularly suitable for low cost housing in rural areas. The first process manufactures a reactive puzzolana based on clay and rice husk. The second process is the manufacture of hydraulic binder based on rice husk and waste lime. The fired product when ground to fineness makes a fast setting cementitious material for mortar plaster foundation concrete soil stabilized bricks etc. A 1 3 binders sand mixture gives compressive strength of 50 kg per cm square. Several tonnes of these

two materials have been used in some experimental constructions [6]

Apart from these, researches on water proofing of mud developed by the National Building Organisation and low cost housing techniques (such as the one developed by Laurie Baker in Trivandrum, the inverted catenary structure using hollow bricks developed by shellcones in Calicut, the funicular shells and brick shelled roof developed by CBRI, Roorkee and SERC, Madras, etc) are also worth mentioning

An attempt to introduce standardisation and mass production in building industry was made a few years ago A national building code was prepared by the Indian Standards Institution This code is highly anti traditional, unsympathetic to local cultures and Western oriented [7] The NBO and few other institutions went ahead with developing techniques using small panel construction and a few prototypes were constructed around Delhi However, these efforts seem to have made little impact and do not hold much promise in the near future

Transport

The transport development in the country has been going on in two opposite directions On one side, it developed a technology for speed mostly by import of know how On the other the traditional forms of transport co-existed serving a large proportion of transport requirements The earlier policies neglected the latter, hence, the recent cry for its development However, the situation and the size of the country are such that it is not wise to take any of these extreme views India surely needs low cost technology in transport, not only for rural, but also for urban settlements Whether the bullock cart is the answer is a question to be answered yet

In the meantime, a silent revolution has been taking place in the urban as well as in some parts of the rural areas The development and increase in the bulk of two wheelers, autorickshaws, and small engined mopeds as well as cycles, cycle rickshaws, water boats, and small power tillers are bringing about this revolution The bullock cart is proportionately a vanishing form

of transport at least in some parts of the country such as kerala. These changes are happening without much conscious effort from the government. The future seems to be in these appropriate forms and research is needed in the areas of developing medium speed vehicles using electrical energy The new government has inclined to try out and encourage alternate techniques of transport especially for mass transport as stated in their manifesto

Water Supply and Sanitation

Techniques for water supply and sanitation are the fields where a lot of things are yet to be desired. Urban water supply and sanitation programmes hitherto had been dreaming towards achieving Western standards An 'if sophisticated or nothing' policy has been the one current For instance, the prescribed quality of water is so high that the cost of treatment and supply becomes extremely high Consequently, either you have water of high quality (even to flush the toilet) or have nothing from a public source No wonder that many cities do not have water supply schemes and the ones which have do not supply enough quantities to all their inhabitants The persons who suffer most are the poor

Water supply and sanitation are absent in a majority of the rural areas If the promises of the present government are to be kept, it requires alternate but safe techniques of supplying fairly good drinking water and ensuring fairly good sanitary conditions On the sanitation front water borne sewerage technology is at present very costly which makes many cities and rural areas do without it Research is needed in this area A few experimental schemes with rural privies were undertaken in the past, but the vigour has already died out it appears

Rural Industrialisation

Apart from the human settlement technologies discussed above the rural industrialisation programme often talked about rather recently will have tremendous implications in the settlement development as to the arrest of migration and transportation The concept of rural industrialisation is not new in India.

Rural areas had their share of industrial production in the past But, the technology at that time was more organic to the life in the rural areas Things have changed now, and the new rural industrialisation programme which had been pursued for quite some time, in fact, was an attempt to miniaturise the sophisticated technology Khadi and village industries did not really have a sizeable share in this programme The industrialisation that was tried in the past included agro-based industries such as sugarcane processing, coir industries, mini cement plants, mini industrial estates (as in Kerala) etc. Many studies point out that most often this approach met with failure The facts that are against this kind of rural industrialisation are that

(i) if the products are not suited to local demands, the possibility is that the rural industry will turn out to be located in a most inadvantageous place which will ultimately kill it, and

(ii) if the process involved does not take into account the local skills available the beneficiaries will not be the local ones which again will create tensions and destroy the industry

The fairly good success of rural industrialisation in Kerala, in fact, supports these facts The geography of Kerala and the transport development in the past and the selection of mini industries mostly based on raw material availability or demand was all in favour of the scheme Secondly, the educational and skill level of Kerala are substantially high compared to many other parts in India

The *new policy of the government is towards reservation of certain sectors entirely for small scale production and to standardise and streamline such production so that decentralisation to the rural areas is possible* However, nobody has worked out the transport problem such a policy will bring in, if the production is not tuned to local demands It is not clear yet, how the agglomeration process can be prevented successfully?

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9

Institutions, Management
and Public Participation

Policy Planning Agency

AT THE APEX of all policy planning in India is the cabinet supported by the ministries, but for all practical purposes the development policy in the country is evolved by the National Planning Commission (NPC) The National Planning Commission is the kingpin of the economic development and planning The NPC prepares the national five year plans as well as controls major policy decisions Even the major housing programmes are evolved by this body The national plans prepared are mostly sectoral in nature and attempt sectoral allocations of outlays. These plans are also criticized for the lack of spatial dimension Recently, there have been a few regional and area development programmes initiated under the aegis of the Planning Commission. NPC has an urban development section as well as a multilevel planning section Most of the states also have Planning Commissions or similar agencies which prepare economic development plans for the states Apart from the Planning Commission other agencies involved in policy regarding human settlements in India include the following

The National Level

1 Town and Country Planning Organization (TCPO)
2 Housing and Urban Development Corporation (HUDCO)
3 National Building Organisation (NBO)
4 National Committee for Environmental Planning and Coordination (NCEPC)

Besides, there are a few other bodies such as the Central Water and Power Board (CWPB), National Council for Science and Technology (NCST) and Department of Science and Technology, the Railway Board, the Central Public Works Department and many other Central Ministries and Departments whose activities and planning indirectly influence policy on human settlement development.

The State Level

1. The Departments of Town Planning and Regional Planning
2. Environmental Planning or Coordination Boards (or Agencies)
3. Economic Planning Departments
4. State Housing Boards, Slum Clearance Boards, Power Boards, Water Supply and Drainage Boards etc.
5. Special agencies such as Development Authorities.

Development departments of the state ministries also play marginal roles in policy making at state levels.

The functions and roles of some of these major agencies in the central and state governments are described below.

Town and Country Planning Organization (TCPO)

It is a planning-cum research agency set up by the Government of India in 1957 "to evolve a full plan for Delhi region, to advise on the development of steel towns like Durgapur, river valley projects like Bhakra and other regional development projects, to advise state governments and local bodies, in the matters of urban and regional planning and to advise on the setting up of a framework within which town planning organizations and similar bodies can function" in the country. TCPO since then have expanded its scope and now has the status of an apex technical advisory and consultant organisation in the country in matters concerning physical planning—urban, rural and regional. However, it has been an urban biased institution so far and continues to be so. The role and functions of the TCPO are broadly four, namely

(i) Policy guidance,
(ii) Consultative Services,
(iii) Project Assistance,
(iv) Study Research and Evaluation

It was mainly responsible for the draft national urbanisation policy resolution It has also evolved guidelines for physical planning of urban areas and regions and also model bye laws and acts for circulation among states Its model zoning enabling laws and model zoning regulations were circulated in the 1960 s. TCPO also assists preparation of plans for special problem regions or resource regions which are inter state in nature

Housing and Urban Development Corporation (HUDCO)

A major institution for housing in India is the Housing and Urban Development Corporation (HUDCO) founded in 1970 by the Government of India with the following objectives

(i) to finance or undertake housing and urban development programmes in the country,
(ii) to finance or undertake, wholly or partly, the setting up of new or satellite towns,
(iii) to finance or undertake the setting up of building material industries

HUDCO *does not undertake any direct construction*, but acts through State Housing Boards, City Improvement Trusts, Development Authorities, Municipal Corporations and other institutional agencies set up to promote and develop housing and area development activities These bodies plan and formulate their proposals, and then approach HUDCO for loans Thus, HUDCO is primarily a funding agency

For the purpose of loans, HUDCO has categorised housing into four groups

1 For the *economically weaker sections* (i e income of up to Rs. 350 per month) it has fixed a ceiling cost of Rs 8 000 per dwelling unit, inclusive of the land cost The interest rate is 5½ per cent with a prompt payment rebate of ⅜ per cent. The period of payment is 30 years

2 For the low income groups (income of or up to Rs 351 600 per month) a ceiling cost of Rs 18 000 has been fixed and the effective rate of interest is 7 per cent with repayment in 15 years

3 For middle income groups (income from Rs 601 1,500 per month) the ceiling cost is Rs 42 000 the effective rate of interest is 9¾ per cent and the repayment period is 12 years

4 For the high income group (income above Rs 1 500 per month) the ceiling cost is Rs 1 00 000 the effective rate of interest is 11½ per cent and the period of repayment is 10 years

HUDCO also finances shops and other commercial facilities necessary for the life of the community For this the effective rate of interest is 14 per cent and the period of repayment is 10 years Complete infrastructural developments like water supply, sewage community centres, roads, parks etc are required to be provided

Financially, HUDCO has raised Rs 11 crores through equity capital provided by the government Rs 68 11 crores through loans and debentures HUDCO has built up a reserve of 1 27 crores Loans from the Life Insurance Corporation of India and others will raise the total assets of HUDCO to nearly 100 crores—but even this is a paltry sum compared to India's housing needs In addition HUDCO has borrowed sums amounting to about its capital funds Loans repaid are ploughed back

During the first five years of its existence HUDCO sanctioned 444 schemes for construction of 1,51 409 dwelling units and development of 23 819 residential plots An official statement concludes "while the existing resources of HUDCO are not enough to enable it to build more than one million houses in the next 25 years or by the end of the century it is expected that the size of the operations will go on rising continuously In 1974-75 it has disbursed only Rs 22 crores in 1975 76 this rose to Rs 36 crores During the current year 1976 77 this is likely to be of the order of Rs. 45 crores or so Moreover with the sale of the houses created by them the asset creation capacity of the housing agency too is rising

National Building Organisation (NBO)

Another major organisation in the field of housing is the

National Buildings Organisation NBO was established in early July 1954 by the Government of India with the following objectives NBO is ' to act as an interface between all incoming technological findings and their application in the field towards low cost construction and improved building quality in India". Furthermore, NBO will seek,

(i) to augment/improve the production of traditional building materials and promote the establishment of new building materials industries,

(ii) to launch and partially finance experimental construction schemes to implement research results,

(iii) to promote rural housing through research, training and demonstration,

(iv) to collect, document and disseminate information on the latest advances in building techniques and housing, and

(v) to develop housing and building statistics and conduct studies relating to social, economic, financial and investment aspects of housing

Though NBO was established originally to develop mainly the building technology, it has expanded its scope to include rural settlement patterns in different parts of India It has established productive communication with research laboratories and development institutions as well as various sectors of the building industry NBO was entrusted with the role of UN Regional Housing Centre for ECAFE in 1956, so has established close contact with many countries It has a well documented library of books, periodicals, technical films and slides They organize symposia and training courses

The NBO studies the problem of rural housing for improving the quality of material available in rural parts and to develop better techniques for rural house construction Seven rural housing wings have been established under the aegis of the NBO, to promote research and propagate the use of improved material and techniques and to train the technical personnel These wings have assisted the state government and other local bodies in putting up the designs of houses and other types of buildings

Natıonal Commıttee for Envıronmental Plannıng and Coordınatıon
(NCEPC)

NCEPC ıs the youngest of these natıonal bodıes Yet ıt
acted as the nodal agency of the Government of Indıa for the
preparatory work of the Habıtat Conference It was also
responsıble for the country report The Commıttee ıs assısted
by the Department of Scıence and Technology functıonıng as
the technıcal secretarıat NCEPC's aıms are to ıdentıfy ınvestı
gate and propose solutıons for the problems affectıng the qualıty
of lıfe of people ın the context of populatıon growth, economıc
development and technology utılısatıon To accomplısh thıs
goal ıt revıews formulates and promotes polıcıes and pro
grammes There are a number of sub-commıttees constıtuted
by NCEPC whıch ınclude

(a) the Envıronmental Research Commıttee (ERC) has been set
up to provıde funds for study and research ın the fıeld of
rural and urban settlement, resource management, envıron
mental degradatıon and ın the sector of nonformal educatıon
and traınıng

(b) the Indıan Natıonal Man and Bıosphere commıttee (MAB)
promotes research on the ecologıcal aspects of envıronment
and operates as a part of the world wıde Man and Bıosphere
Programme of the UNESCO

(c) the Commıttee on Human Settlements ıs concerned wıth
ıdentıfyıng and promotıng research ınto the problems of
development of our vıllages and cıtıes,

(d) the Commıttee on Rural Envıronment focuses specıfıcally
on the ıntersectoral problems of rural development

(e) the Commıttee on Industry and Envıronment promotes
research ın combatıng pollutıon of aır water and land—
arısıng from the process of ındustrıalısatıon and

(f) the Commıttee on Nature and Natural Resources ıs
ınterested ın promotıng research on the conservatıon of
flora fauna and other natural resources.

The Department of Scıence and Technology has funded a
number of research studıes some of whıch relate dırectly to
problems ın human settlements. For example the ımpact of

mass transportation on urban form the strategy for locating industries in rural areas and environmental considerations for master plans Other projects funded include research on waste utilisation waste recycling energy conservation planning of landuse and of infrastructure optimisation of water supply system, and abating of pollution in air, water and on land In promoting such research emphasis is placed on encouraging inter disciplinary team work

In addition the Department of Science and Technology functions as a nodal agency for several United Nations activities such as the *United Nations Environment Programme (UNEP)* and the *United Nations Habitat and Human Settlement Foundation (UNHHSF)* It has coordinated studies and dis cussions on desertification, ocean research development of solar energy and the International Referral System

THE STATE PLANNING DEPARTMENT

State town and country planning departments have been set up in most of the states and in union territories The organi sational structure and the function and powers of these departments are varying from state to state and are mostly defined by the state acts regarding urban and regional planning At present most of these organisations are heavily urban biased and are mostly engaged in assisting the state governments or local bodies in preparing master plans for cities A few regional planning attempts are made in some states such as in Tamil Nadu Even in such cases these plans are mostly physical development plans

These town and country planning departments do not enjoy important positions in most of the states Many of them do really struggle for their existence Even after 20 years of planning activity these departments could not prove and convince the governments of their importance One major factor which went against them was the narrow minded physical approach and neglect of the rural development dimension With the creation of special urban development agencies and plan ning authorities the importance of these departments is further diminishing and are becoming mostly advisory in nature Broad perspectives they are still lacking in most of these departments

for them to take up this advisory task. It is to be taken in view that urban planning in India is dominated by engineers and architects and most of these departments had their origin in public works departments. Some of the states have created or propose to create statutory town and country planning boards at the state level to manage the physical planning activities in the state.

State Housing Boards, Slum Clearance Boards etc

A proliferation of public authorities could be witnessed in the field of human settlements in most states. Sectoral agencies are coming into being to look after specific aspects of human settlements. Most of them are autonomous. To formulate and undertake housing programmes to arrange finance, to advise the state government on matters of housing and to work in liason between the central agencies and the state housing boards have been created in many states. Most of these boards work only in urban areas and have urban biases. It has been felt in some states that a separate agency is required for looking after the slum housing leading to the creation of Slum Clearance and improvement boards. Similarly, water and drainage boards, urban transportation planning cells and urban transport corporations are being created at the state level or at city or metropolitan levels. These are mostly implementing agencies but have some say on policy planning on human settlements.

IMPLEMENTATION AND MANAGEMENT AGENCIES

Local Self Governments

Implementation of development works and their management is undertaken through a number of functional departments and agencies some of which are discussed above. In implementation and management the sectoral approach is still followed e.g. housing boards for housing, education departments for planning and developing educational institutions, the electricity boards for supplying electricity, PWD for roads and other public buildings etc. The local self government is traditionally weak and do not have much say in the activities

of these agencies Consequently problems arise with regard to the coordination of the works of these agencies These problems are more glaring in urban areas The earlier arrangements were, and the present arrangement in most smaller places still continues to be such that the local self governments implement the master plans prepared for their towns But the legal provisions and financial position of these local self governments did not allow any of these plans to see light Moreover, these local bodies had no jurisdiction outside the municipal boundaries Yet no action came forward to strengthen the local bodies Years of negligence seems to have made them weak and almost useless public bodies

The following statement aptly describes the situation

> The fact must be faced that the basic cause of the almost hopeless state of our towns and villages is the poor quality of our local governments Elected by people who have never known anything better than the dirt and filth they are surrounded with, and are, therefore understanding in their attitude the local bosses who run our civic bodies are under no sort of pressure to perform well It is no wonder that these elected but honorary posts have come to be looked upon as offices of profit in the literal sense of the word and as a means to political advancement rather than an opportunity to serve fellow citizens The result is there for all to see There is mismanagement of precious financial resources, inefficiency, corruption, petty politics and intrigue instead of purposeful activity and dedicated work It is not surprising that there should be a dramatic change for the better whenever a municipality is superseded and its work entrusted to a trained officer . All this has created such an atmosphere of hopelessness and cynicism that people have begun to look upon inefficiency and corruption in municipal bodies almost as a part of the natural order of things.[1]

The story of local self government in rural areas is the same if not worse

New Management Agencies for Urban Areas

More recently legislations were brought in for the constitution for town improvement or city improvement trusts in many states These agencies however did not have the function to plan or implement a master plan, but were given powers to undertake programmes for specific areas In effect they were responsible mainly for developing town extensions for housing and commercial development only. Even these trusts could not coordinate the activities of other agencies With the increase of agencies such as housing boards, the slum boards etc. the coordination, plan preparation and its implementation have become more and more problematic. The tendency at present is to create development authorities with wide powers of planning, land acquisition and development. The first of this kind to be created was Delhi Development Authority (DDA) in 1957 This was followed by Calcutta Metropolitan Development Authority (CMDA) in 1958. At present such authorities are functioning in Bombay, Madras, Hyderabad, Bangalore, Ahmedabad and a few other cities. The combined powers of these agencies vary from state to state, but all of them are statutory agencies with legal powers to plan, acquire land and even develop new towns. However, most of these agencies concentrate more on physical aspects of development. Urban Arts Commissions are constituted under some of these to look after the architectural and urban design aspects

Apart from these bodies, planning authorities and trusts are also functioning in many smaller cities, but their functions are limited mostly to either a regulatory nature, or the development of sites and services for low, upper and higher income groups. There is virtually no effective arrangements for poor people's housing and other requirements in most cities.

With the creation of these bodies, the local government are becoming redundant and almost defunct bodies, without much functions. In many states they are superseded and being administered by civil servants. Their present roles in most cases are issuing building licences, cleaning streets, and sanitary works However, many such functions are also being taken away from them There is no clear thinking regarding their role

in the future management of cities The state governments who
are responsible for their creation take little interest

Rural Agencies

There is no such development with regard to rural areas
The planning of individual rural settlements is never attempted
except in isolated cases and rural settlement planning is not
done by any central agency There had been attempts to make
block level plans and regional plans, but with least success
District Level Plans wherever made are mostly economic plans
with only a little thinking on spatial aspects Some states
have initiated regional planning (such as Tamil Nadu) At
present the normal practice is such that each sectoral agency
decides and plans on its own with little co ordination The crea
tion of Taluk Development Boards and District Development
Boards has been done in some states, but their roles are very
limited

In this situation, the rural settlement development is very
haphazard and chaotic There is neither any developmental
coordination nor any regulatory mechanism worth the name
The local government—panchayat's—role also is limited to
the provisions of Street lighting street cleaning etc. Little
attention is being given towards the creation of adequate plan
ning and management agencies for the development of rural
settlements

Most rural areas lack initiatives and financial status to plan
and execute developments by themselves In this context the idea
of Habitat Banking is interesting The Reserve Bank of India
constituted sometime back a panel to go into an idea which
was emerging then It was to organise the work and generally
provide necessary direction and advice to commercial and co
operative banks in the implementation of banking programmes
in habitat development Though this idea did not develop
further even after two years of its initiation, a system of rural
banking facilities is slowly emerging Lead Banks are also
appointed to different districts under which any one of the more
than a dozen nationalised banks takes the lead in planning
credits and other arrangements in the respective districts allotted
to them But loans are seldom available for housing sanitation

and similar purposes, from the commercial and other banking
institutions to rural authorities

International Agencies

The Government of India is deeply involved with inter-
national agencies, both governmental and non governmental.
Voluntary agencies of many countries are actively working in
India, mainly through non official groups and organisations.
Although India is not the seat of any significant international
agency, both the government and non official bodies are active
participants in their work

In fact, the problems created by an extensive interface
between India and the outside world generate difficulties of two
sorts In the first place, there is a plethora of institutions and
groups from different parts of the world and international
agencies They represent varying ideologies or philosophies,
national interests, etc There is thus a fragmentation of effort—
each agency creates a comfortable enclave in which it functions.
Coordination of efforts and, more so, that of policy becomes
almost impossible

Secondly, India is largely the recipient of material and
ideational aid, the client, and hence there is a tendency to look
to what the donor agencies or governments want or expect, and
to meet these requirements, rather than what the situation in
India requires and what Indian capabilities can achieve The
judgement of the latter is left to the donor agencies willy nilly

Hence, a mobilisation of talents energies and efforts of the
Indian people themselves has become difficult The creative up-
surge in India is pushed down In dealing with Indian agencies,
or individuals in key positions, one gets the feeling of facing a
middle-man whose own position depends upon the goodwill of
the donors—mostly foreign but sometimes Indian Sometimes
the key local individuals are at two or three levels removed from
the centres of ideas and funds The problem then becomes that
of getting as close as possible to the sources of funds and
influence, or of forming organic links with the already existing
channels On the whole organisations have relatively little
impact on the housing and habitat situation As stated earlier,
two-thirds of the people construct their own housing, so that on

the basic level of housing construction these agencies have little control let alone a more complicated, total environmental planning programme

The major international agencies working in India now are UN missions such as World Bank, UNESCO, WHO, FAO etc., and foundations like Ford Foundation and agencies like Oxfam, British Council, Swallows of India and USAID A few bi lateral projects are also being developed mostly with rich developing nations For instance Iran and Kuwait are helping India to develop iron ore and irrigation projects under agreements to help each other These kinds of bilateral arrangements are more favoured now in India

The World Bank and UNDP are agencies which provide large financial assistance to India The World Bank has agreed to invest a large amount of Rs. 47 crores on Madras Metropolitan Development Authority for urban development there (One of the objectives of creation of such organisations as MMDA is to negotiate with international agencies and also to administer such help received) It is also investing heavily in Bombay Metropolitan Development, and for rural development projects in many states The WHO has been assisting India for water supply and sanitation The UNDP as well as Ford Foundation has helped CMDA and DDA directly The Ford Foundation also assisted India in drawing up a pilot scheme for growth foci development in selected rural tracts The World Bank, UNDP, WHO, FAO etc , have variety of interest and involvements in rural development programmes in different parts of the country

PUBLIC PARTICIPATION

The concept of public participation has arrived from the west But the mechanism of public participation is hazy and we are not yet clear as to whom public is implied here Government of India and state governments are particularly aware that no programme can be successfully implemented without active participation of the people especially in the area of rural development The economic policy statement of the new Janata Government has this to say

In evolving and implementing national strategy of agri-

cultural and rural development we believe that there must
be *close association of the people at all levels both in planning
process and in the more important task of implementation* We
recognize that an effective programme of implementation
must necessarily have the support and assistance of the State
Governments and the State Administrations will associate
institutions at the district tehsil and village levels as well as
voluntary organizations which are willing to extend a help-
ing hand It is our firm conviction that planning and national
development must go hand in hand with a participative style
of democracy

There had been varying degrees of participation by the
people in different programmes in different parts of the country
But their role is mainly in the implementation stage The
people s participation in policy making and planning is indirect
and effected through a variety of means apart from the elected
bodies The professional organisations like the Institute of Town
Planners Institute of Economics Indian Science Congress,
Indian Institute of Architects, Indian Institute of Public
Administration etc. have been increasingly involved in policy
making as well as planning in the country The pressure groups
such as Chambers of Commerce, industrialists labour unions
etc , have however, more say in the government s policies But
the rural and urban poor in the unorganised sector of agricul
tural commerce and small industry are handicapped Rhetoric
of public participation—a something being done attitude
embedded in sporadic *shramdhans* will not be of any help

VOLUNTARY AGENCIES

A few voluntary agencies and movements have particular
programmes of habitat development which are worth mention
ing

Habitat India

A society called Habitat India was founded during 1976 to
coordinate the habitat movement in different parts of rural as
well as urban India Many north Indian governments joined the

movement and this movement was indeed in response to the United Nation's Conference The movement had three ingredients namely a slogan (ruralisation) leadership, and people's participation It was organized on an interdisciplinary concept with the cooperation of various departments of state governments, technocrats, economists geographers, sociologists, village planners, architects, bankers etc In the words of Charanjit Chanana the *Chairman of Habitat India* ·

> It was decided that at least one village per district should be selected to be developed as Habitat Village model The main criterion to select a village is the acceptance of the concept by the villagers themselves One village, therefore, was selected out of five or six suggested in every district The other tests of selecting the habitat village are that it should be representative of the rural settlement problems of the district, it should have a potential for working viability and it should be a typical village. In view of this 18 villages were selected in Punjab, three in district Gurgaon in Haryana, 26 in Rajasthan and one village Samalka in the Union Territory of Delhi Delhi Administration has also selected five villages in Delhi, while U P would identify its villages soon
>
> The process of development was initiated by conducting grass root techno economic surveys of each village Each village has to have a habitat workshop which would invite experts from different fields to work on a plan for accelerating the rate of economic growth through the development of all aspects of the village economy In view of the issues raised by the techno-economic surveys, a plan for the village has to be prepared The experts in different disciplines are invited to participate in this process They are given a copy of the techno economic survey report, a copy of the village map and other basic data about the village. They are requested to prepare a plan of development in respective fields and submit the plan budget and time schedule Once this is done the Habitat India would help in implementation of the plan with organizing the peoples' movement.[2]

However, the movement seems to be slowing down after

1977 for political and other reasons Though the concept was
quite laudable its style of function especially during the
emergency has been criticised by many

Operation Bharani

Another interesting project was initiated by the University
of Mysore with the twin objectives of providing leadership for
rural development in an adjoining rural area comprising
more than 100 villages and in this process to learn so as to
improve the academic curriculum towards the needs of the
society The programme was to be implemented with the active
participation of teachers and students of the University and with
the cooperation of the government agencies and the people
Unlike the Habitat movement it did not select any particular
village, but a large area comprising several villages

It is a research-cum action programme launched to
develop the rural areas of Hunsur Taluk of Mysore District in
Karnataka State

The project aims at

  (i) extending the benefits of modern science and technology
       to rural areas
  (ii) devising and testing new institutions and organisations
       for the most effective use of material and human
       resources of rural areas,
  (iii) preparing and implementing an integrated development
       plan with accent on weaker section and
  (iv) sensitizing the University education with the basic
       realities of the environment in which it functions

With these broad objectives in view the project was started
on 25-7 1976 in Hinkal village panchayat area of Mysore taluk
adjacent to the University premises on a pilot basis It has now
been extended to Hunsur taluk Thirty four task forces headed
by University experts were constituted to make deep studies
of rural problems relating to their respective fields and to
suggest action programmes within an integrated development
plan framework

The project is being implemented with the limited financial assistance from Karnataka State Government and the University of Mysore Small amounts have also been donated by other agencies The University teachers involved in this project give their time without any direct or indirect remuneration The same is true of the student community

Regarding the achievements, the University reports

Several University teachers and students have been so closely involved in this project and their expertise is so readily available to the project that it has already yielded some interesting results Several Ph.D works have started on themes pertaining to rural development Some departments/institutes have incorporated this project in their curricula Several master s degree students are working with the faculty in preparing action plans and thousands of students have participated in manual work with the villagers to construct roads and drains, to excavate tank beds and to plant trees

On the other fronts, the project has been able to provide safe drinking water to some villages has successfully ex perimented hybrid jowar production schemes for small and marginal farmers has started a number of nursery schools, has trained primary school teachers in latest methods of teaching, has embarked on improving science education at the high school level, and is set on starting pilot schemes on gobar gas plant solar energy, model primary education adult education, landuse planning agricultural marketing community irrigation and a host of other activities

In the organisational sector, we have made notable gains We have been able to get optimum co operation from all the official and non official agencies in the area We had meetings with village panchayat leaders and representatives of the weaker sections We are about to launch a programme of instituting new organisational systems which would promote the cause of the weaker sections

Much of our achievements so far have been, not because of the funds at our disposal which are meagre by any standards but because of the willing cooperation

between the University, Local Government and the people
The future of the programme rests again on this co-operative spirit but the size of the programme would depend
squarely on the amount of funds at our disposal [8]

The Ahmedabad Study Action Group

In their own words, the Ahmedabad Study Action Group
(ASAG) is a voluntary no-profit no-loss organisation of concerned individuals registered as a Public Charitable Trust It is
an interdisciplinary group with participants drawn from various
fields of activities—mostly professionals from design, planning,
social science education economics medicine and social work
areas ASAG addresses itself to various tasks of the community
with a multi-disciplinary approach and an action bias By the
nature of its composition, the group takes a comprehensive
view of the given problem and attempts to evolve a work-
methodology leading to active community participation

ASAG specifically wants to work for the poor and oppressed
in cities and villages They see themselves as catalysts in an
attempt to bring new direction to the solution of problems.
They see themselves in an advantageous position for this free
from constraints of professional and governmental agencies
ASAG sees the role of voluntary agencies, such as itself as very
crucial in bringing about changes, and as a liason between the
government and the people The following are their areas of
involvement

1   Rural and urban low cost housing
2   Integrated development programmes
3   Slum relocation slum rehabilitation
4   Village reconstruction
5   Community development
6   Supplementary education
7   Alternative approaches to health care
8   Income supplementation
9   Credit referral
10 Action oriented field research

ASTKA

A group of scientists and technologists of the Indian Institute of Science, Bangalore formed a society called Application of Science and Technology to Rural Areas (ASTRA)

ASTRA views rural development as a process directed towards,

(a) *satisfaction of basic needs of the rural population, starting with the rural poor in order to reduce inequalities between different sections of rural society and between rural and urban areas;*

(b) *increasing rural participation and control in order to promote the self reliance of villages, and*

(c) *creating harmony with the rural environment*

The approach of ASTRA in their own words is commitment to a neighbouring rural area through

(a) *becoming aware of the problems of the people, particularly the poorest,*

(b) *generation of technologies appropriate to that area as part of the academic activity, and*

(c) *promoting diffusion of such technologies*

Thus ASTRA is fully a technology oriented agency and its works are mainly in the area of technology covering various aspects such as energy, housing, water supply, agro-processing, resources and transport ASTRA works through its extension centre located at Ungra amidst a cluster of villages near Bangalore This area is used to a grass root understanding of the problems of the people These problems and needs of the people are studied against the technology available to them at present The technologists of ASTRA then develop new technologies or improve the present ones and a number of options are given to the people to choose from

The Inevitable Others

What we have covered here are only a few leading ones,

There are innumerable other agencies working at local, state
or national levels There is an organization called
AVARD, the Association of Voluntary Agencies in Rural
Development In the urban areas, each large city has a number
of voluntary agencies

A few rural development projects also have come up in the
different parts of the country such as Mehaboob Nagar and
Kharim Nagar in Andhra Pradesh or Thilonia in Rajasthan,
mainly because of works of dedicated public men, scientists and
others The success of these projects in particular is to be
watched as they are interesting experiments of development
including human settlement development

One interesting feature of rural development in India
recently is that a number of non official and quasi-official
agencies are getting themselves involved in this For instance,
the Federation of Indian Chambers of Commerce is launching
their own programme Universities, banks and a number of
industries are now adopting single village or numbers of villages
for development However, a major drawback in these pro-
grammes is that they are all based on the "charity" approach
And many organisations do this kind of charity work which is
fundamentally different from their practised ideals in other
fields Secondly, most of these 'single settlement projects' have
great limitations as it is doubtful whether it is possible to
improve or develop rural areas village by village Inputs in one
particular area, (especially capital input) will dissipate and drain
away in no time

RESEARCH AND TRAINING INSTITUTES

Research relating to human settlements and habitat is
confined only to a few institutes in the country though the
works of many other institutions are indirectly important In
the areas of technological research relating to human settlements
mention could be made of National Building Organisation
(NBO) Central Building Research Institute (CBRI) Roorkee,
National Environmental Engineering Research Institute (NEERI)
Nagpur, Structural Engineering Research Centre, (SERC)
Madras and a number of Institutes of Technology and
Engineering Institutions

The most important field of research as regard to human settlements in India is the planning management and development of human settlements These in fact require an inter-disciplinary approach to research So far major works in this field in India used to be done by architects, engineers and geographers all in isolation and had therefore, great limitations A few research institutions are coming up at present under the universities or independently Some of these are whole time research institutes and some of them impart also training

Special mention may be made of the following

1 Institute of Development Studies, University of Mysore—Research on policies and planning training in urban and regional planning, development planning, and environmental planning including doctoral programmes

2 Centre for Regional Studies, Jawaharlal Nehru University, New Delhi—Research and academic programmes on regional aspects of development and settlement systems

3 School of Planning and Architecture, New Delhi, under Ministry of Education—Research and postgraduate professional programmes in urban planning, urban design, landscape architecture, housing and traffic and transportation

4 Indian Institute of Technology, Kharagpur—Professional courses in city and regional planning and also doctoral programmes

5 Operations Research Group, Baroda—Private organisation engaged in research and project consultancy They have done some pioneering work in the projection of housing requirements

6 Centre for Development Studies, Trivandrum—Specially interested in organisational aspects of appropriate technology among other things

7 Indian Institute of Management, Bangalore—Research and short term programmes on management of environment A Centre for Habitat and Environmental Studies (CHES) was created recently

8 Indian Institute of Regional Development Studies, Kottayum—Studies on local ecology and economics of regional development in Kerala

9 Centre for Environmental Planning and Technology, Ahmedabad—Professional training in city planning and architecture

10 Institute of Social and Economic Change, Bangalore—Research in urban development among other interests.

11 Centre for Development Studies and Activities, Poona—Research, planning and training in housing, community development, delivery of services etc

12 Madras Institute of Development Studies—Research interests in development and housing

13 Council for Social Development, New Delhi—Research in rural development

14 Urban Systems Institute, Bombay—Research on urban systems

15 National Institute of Urban Affairs, New Delhi—Research on urban policies and programmes and short term courses

16 Indian Institute of Public Administration, New Delhi—Interested in urban management studies and conducts short term courses

17 Indian Institute of Management, Ahmedabad—Interested in rural development action programmes

18. IIM, Calcutta (Centre for Management of Urban Systems)—Studies in urban management

19 National Institute of Rural Development, Hyderabad—Short term programmes and research in rural development

20 Gandhigram Rural Institute, Madurai, Tamil Nadu—A deemed university doing research and training in rural development

Apart from these there are a number of university depart ments such as departments of Geography, Sociology, Economics, Urban Planning Architecture, Regional Planning etc. scattered over 100 universities or other institutions in different parts of the country There are at present 10 institutions and university departments including the ones mentioned above imparting post

graduate training in urban planning, regional planning and rural planning More than a dozen universities offer first degrees on architecture There are more than 100 engineering institutes or colleges offering professional degrees in engineering Engineering College, Madras runs a post graduate courses in Urban Engineering and Traffic Engineering Only two centres offer master's courses in architecture, and there is only one urban design course in the country However, most of the training institutes in Urban and Regional Planning (though not all) are biased towards urban planning and that too only physical planning Viable professional courses on rural development, village planning and rural architecture are yet to develop but there has been a move in this direction in some quarters Professional courses in integrated urban development— as different from master plan oriented town planning—with physical planning, urban management, urban services planning, urban software development, etc, as components is conspicuously absent

INFORMATION

The information system for habitat development in India is fairly well developed in certain aspects, but too meagre in some aspects Most of the information regarding population characteristics, housing conditions, incomes, building industry etc, is collected through the Census of India which is conducted every 10 years and through the National Sample Survey Organisation Both these are information disseminating agencies as well Statistics regarding a variety of aspects of the economy are collected and disseminated through Central Statistical Organisation, and State Bureaus of Statistics However, one important lacuna in this field is that except for certain key statistics no information can be got for spatial units below the districts

Though there is lots of research carried out within the country there is little coordination between them and the dissemination of the research output is extremely limited There are only very few professional journals in the area of regional and rural planning architecture, design etc In urban planning there is none

One important media which links the planners the intelli-

gentsia, the government to the public at large is the newspaper and popular magazines. Many of them have been giving adequate importance to major issues. Apart from these, pamphlets hand outs etc, are prepared on special programmes and projects by the government publicity organisations. However, the effectiveness of printed matter is extremely low in the rural areas as the literacy is still very low. Communication with the masses is still very amateurish in the country

To Sum Up

From the above discussion of management institutions a few interesting features can be discerned :

1 There are opposing tendencies at work. At one level there is a tendency to decentralise and create autonomous institutions to look after individual sectors and at another level there is a tendency to centralise such as in the case of the planning authorities. If these opposing tendencies are well adjusted in a spatial frame it may be advantageous otherwise they can create bottlenecks. As part of these phenomena, there is an increasing tendency to bureaucratise and elitise planning and development with the creation of autonomous bodies. At the same time there are tendencies to democratise some of these bodies, such as the taluk development boards. In any case, policy planning institutions are becoming too sectoral, highly centralised and, therefore, remote from the people. HUDCO, Water and Sewage Boards etc., which cannot see the problems at local level are cases in point

2 With the proliferation of institutions such as development authorities, trust boards, housing boards, etc., the traditional local governments are becoming more and more weak and, in fact, redundant. Most of these democratic institutions are superseded and there is nothing democratic left in them. If they are useless, why not scrap them? Otherwise, why not augment them?

3 Many institutions outlive the purpose for which they are originally created. In such cases, institutions become inefficient or redundant or redundant. In these situations, either their dissolution or strengthening is required. Instead, in many cases new institutions are created with the old ones left as they are. Each of

these institutions there will continue to struggle for its existence creating functions sometimes very difficult so that they can survive One problem in this area is that no institution is created for a programmable targeted task so that it automatically becomes defunct after the lapse of time or after completing the task In the absence of a framework for institutional development, personal and other vested interests do enter in the institution building quite often especially in the case of voluntary agencies

4 In the absence of a clear policy or framework there is gross inadequacy in the functioning of existing institutions with respect to certain aspects as well as areas All aspects are not systematically covered, sometimes there are gaps and overlaps Similarly, all areas are also not systematically covered Leaving aside the special agencies created for problem areas, even in the case of common aspects such as housing, health, education etc , certain areas are looked after by an agency at lower level while certain others are linked to a much higher level to which the local people may lack access. What is needed is a framework or a policy which can systematically cover all areas as well as sectors Of course, it need not be rigid, and final

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Conclusion

FROM THE previous chapters, it is evident that many programmes of settlement development were taking place in India without a comprehensive, holistic or clear policy Also we saw that this policy vacuum is reflected in many aspects of economic and social planning and development This has resulted in the drifting and digression of efforts in many directions It has also led to the dilemmas which have come to the surface more prominently in the recent past The urban bias of the programmes and the rural bias in the talk are all part as well as consequence of this situation

The basic philosophy for a settlement policy should come from a clear policy on development itself It should evolve from solving the dilemmas and conflicts of interests such as intellectual *versus* manual, agriculture *versus* industry, whole *versus* part, urban *versus* rural, the poor *versus* the rich Indians have lived with the problems arising out of the conflicts of interests for a long time and even after 30 years of independence there is no sign of a resolution History has produced a socio-economic structure in India in which lies the fundamental problems of its development and root cause of the above mentioned dilemmas This socio-economic structure can be changed, *in the nature of things only slowly and that too only through* national debates consensus and very essentially if there is political will and *in the absence of all these, by revolution But none of these seem to be happening in India*

Probably, a major reason for such a situation could be found in the general Indian character namely "postponement which *is reflected in its intelligentsia as well India's elite class and the* bureaucrats have successfully postponed crisis after crisis by

diversion of attention, and through palliatives We have seen that there were attempts at structural change, but in the absence of consensus and political will very little has been achieved. As things develop the basic conflicts are in fact becoming even sharper. The elasticity of Indian intellectuals to drift and procrastinate and to live with the problem walking along the edge than to face the reality, seems to be immeasurable and the bargaining power of the underprivileged majority, for many reasons, is extremely low In this situation the present dilemmas are bound to continue so far as the politics, bureaucracy, and the social structure continue to be the same The Indian intellectual is facing one more dilemma in this context whether to vote for a wholesale change and transformation and be caught in its whirlpool or to seek solutions within the existing chaotic mess The mood of Indians at present barring a few seems to be favouring the latter Any ideas about the kind of society India wants to create are far away beyond mere visions, it seems In sum postponement, indecision about the basic issues at all levels The result of this indecision creation of crises to solve problems, vested interests and pressure groups playing roles, deepening of social stratification and dualisms More vested interests more postponements, more indecision, the vicious circle If anything has to be achieved, a group argues, it requires,

> .. radical transformation of attitudes on the part of the government and other decision-makers, a re- or de education of our professionals and technocrats, a de-emphasis on technological solutions, a re shaping of our organizational mechanism equipped to work only with the formal organized sector, and a re tooling of our entire system conditioned to curative solutions.*

Now, the question is ' would that kind of rethinking be forthcoming? And will a reasonable policy on human settlement evolve in this social political bureaucratic framework? We have seen truncated and biased attempts on this in the past Such biases in a national settlement policy can be expected

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* Kirti Shah, ASAG, Ahmedabad, discussion with Surinder Suri

even in the future as long as the basic dilemmas are unresolved
Therefore, probably it is correct to say that what is needed
first is not a technocratic or philosophical statement on the
pattern of human settlements in India but a clear and overall
idea of a socio-economic frame—not necessarily rigid—on
which settlement development in India could be guided A
national settlement policy would be meaningful only then This
requires a countrywide debate

Nonetheless and in the nature of things, a national settle-
ment policy might be evolved and even adopted by the national
government But then, the question remains Would that policy
be based on a just development philosophy guaranteeing equal
opportunities for all ? Urban or rural, intellectual or manual
Further, would India have the institutional apparatus to imple-
ment such a policy ? Would it be, in other words, possible to
go beyond manifestoes and mere statements of intentions ?
These questions, we think, are not to be and cannot be answered
at present, they have to be raised and debated upon

Now, let us turn our attention to one particular and
practical problem and stumbling block regarding habitat
policies, at a more mundane level Fundamentally, scientific
secular holism is not a part of the Indian public policy and
administration Anything like a ministry or department of land
use, human settlements and quality of life will perhaps have to
be imported from outside Even among scholars and writers on
public affairs, there has been a decay of the creative, technolo-
gical and managerial imagination Belief and trust on locally
generated ideas is also very low As argued at several points in
the report, there appears to be one main reason for this failure
to come to grips with the human settlements issue It is the
failure of the ruling and controlling elite to *articulate* the ethos,
the existing socio cultural reality, to develop its logic or ration-
ality Confronting this logic and the new and developing
circumstances in the country, India's intellectuals must seek to
transform, to develop a new ethos or ideology, perhaps even
based upon the systematic rejection of the prevailing ethos

There is a significant sense in which the ethos is spelled out
in the settlements Thus, the logic of the existing or traditional
settlements must be read not merely in terms of shelter but as
an expression of the pattern of the totality of life and inter-a-

tion with environment A new settlement policy must also be
sensitive to this *holistic* dimension but it cannot start from
scratch It must relate to what has gone on before

We have attempted this book in the light of the Vancouver
recommendations Therefore, we will have to look specifically
into the influence Vancouver had in India It has been argued
and proven again and again, that intention and policy statements
are not followed strictly in spirit through strategies programmes
and action Very often it is noted, that actions are contrary to
articulated interests However, more and more statements and
repetitions of intentions is one way of inculcating a culture
probably, which might help develop public opinion and
pressure groups This process has its limitations indeed, but if
they set any value on development international symposia are
catalysts in this regard Vancouver's influence in India can be
taken only in this light

It is one thing for India to sign the Vancouver recommen
dations for national action, and it is quite another matter for
the government to be committed to it Many of its recom
mendations might have already entered the policy line, but
they cannot be said to be an outcome of Vancouver One thing,
Habitat produced nothing new and most of the ideas listed
were already around Secondly many Indians would even argue
that Habitat gave little attention to the problems facing countries
like India The Habitat conference had not made any significant
contribution regarding the policies to solve problems of rural
settlements Thirdly, there are institutional and implementation
problems arising out of the coverage of habitat recommenda
tions It covers nothing short of a national development policy
Which is the authority then to implement these? The cabinet?
The Planning Commission? The TCPO or any other? There is
no one agency in fact but a host The tendency in India is to
assimilate any new idea or approach to the pre-existing set up
Officially, some ministry or department "captures" the new idea
and monopolizes it Other departments and implementation
may try to get into the game and failing in that, will ignore and
neglect the new approach In other words, any new idea must
be adapted and implemented through a highly bureaucratic
*culture In this situation anything can happen only if the
central government is committed It does not seem so But*

then, it is legitimate to ask why should any government be so committed to a set of recommendations, which does not convince a nation fully as a solution to its most pressing problems, viz., hunger, employment, opportunities

However, it is not to suggest that the Indian Government has *completely neglected the Habitat movement altogether*, nor to say that it had no effect in India. There are two major effects that can be attributed to Vancouver ·

    (i) spread of awareness, and

    (ii) *legitimisation*

If talk is a forerunner of action Vancouver created a lot of base for action The preparation for Vancouver was quite elaborate and so was media coverage Public awareness, though limited only to top levels, of the habitat problems has increased. So is the awareness among policy makers and politicians It triggered many voluntary actions from interested groups as well. Many political speeches now echo Vancouver However, there are some problems in this aspect also On the one hand, the enthusiasm is dying out Now there are never things to talk about, the environment, the Childrens' Year etc. On the other hand, spread of the message has not been sufficient and habitat concept is far from being inculcated into the development philosophy And thirdly, it is necessary to have more political commitment and public awareness to save the movement from becoming another technocratic or elitist hoax, by preventing the development of institutions which do not really have deeper commitments *But how to do that kind of a weeding out?* Ways are to be found out Probably we need more harsh and constructive criticism, and even more talk by more committed people, more research and more vigilance

Legitimisation in the name of international sanction, of the actions is what any government would like to have In this way habitat recommendations have more appeal to governments at least to legitimise their past as well as present actions This legitimisation can have positive as well as negative effects. On the positive side, it encourages governments to go towards clearer policies and useful action such as spatial elements in planning basic needs and drinking water programmes. On the negative side the elite rulers try to legitimise their wrongful *deeds, by misconstruing and by misinterpreting international*

understandings which result in the 'clean up' programmes of the kind we had during the emergency

The spread of awareness and legitimisation are two sides of the same coin When awareness and perception of problems are themselves different to different people the suggested solutions also will be so Therefore, it is essential that there are more public and national debates to avoid legitimisation of whatever a government wishes to decide on International gatherings alone won't help

Because movements such as Habitat, reach countries like India at an ethereal level, they do not connect with the live problems of the country which exist for the common, illiterate people in slums and villages By creating the illusion among the elite (whether it is temporarily in opposition or in power) that something is being done (or has been done), the real problems are shunted out of sight And if the problems insist perversely on disturbing the elite, there is always someone ready to accept the odium for doing the dirty work, a la Emergency, by trying to solve problems by force Poverty can be removed by removing the poor ! Even democratic policies do that, but inefficiently Slums can be cleaned up by driving off the slum dwellers !

The point here is not to discuss emergency rule in India, but to show that issues related to Habitat have assumed a crucial significance in India, and just because human settlement policies are not discussed widely in public, nor is a rational nationwide consensus evolved, the policies or programmes undertaken are sporadic, underhand and violent Instead of collecting or generating mass support and participation, slums were bulldozed despite popular resistance In the nature of the case, both the slum clearance programme and the popular resistance to it are non rational, there are no arguments on either side, but only a fight from which no one emerges any wiser.

The Habitat movement in India did not help to bring about a nation wide (even) discussion and debate on the settlements and landuse policy A small group emerged that attended Habitat seminars and conferences, conducted sponsored research, and prepared papers. But the vast bulk of even the educated public remained outside the discussions and studies The common people, on the other hand did not even know

what Habitat was or what it meant. And the nation continues
to leap ahead into the industrial age with its slums, slush,
smoke, noise and negative qualities of life. Some day someone
else may seize power with the determination to "clean up India"
according to his whims and fancies Can we avoid a blood-
stained 'Habitat Programme' in India in the future by initiat-
ing a rational and meaningful discussion now?

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